

REMARKS

Request for Interview

As mentioned in telephone messages left for the Examiner on August 19 and 23, 2011, Applicant respectfully requests an interview between the undersigned and the Examiner at a mutually convenient time before the Examiner takes up this application for action.

Obviousness Rejections

On page 3 of the Office Action, claims 1-15 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneda et al. (W099/62482) in view of Noda (JP07-304630). On page 9 of the Office Action, in paragraph 5, claims 1-15 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai et al. (JP2000136114) in view of Yoneda et al.

In response, Applicants note that with respect to the previous argument of unexpected results regarding separation, the Examiner indicates that it still remains unclear how this is deemed an undesired property. Regarding the Guidelines on Stability Testing of Cosmetic Colipa/CTFA, 2004, the Examiner indicates that nothing within the reference either implies or teaches that the separation observed by Applicants should be avoided. In this regard, the Examiner indicates the “appearance” taught in the guidelines is inclusive of the separation observed in Yoneda et al. and is indicative of stability. The Examiner indicates that Applicants have just merely concluded that “appearance has significance in the art” without establishing that separation into two layers is significant in the art. While appearance may be significant towards stability, the Examiner indicates that the record does not establish that separation into two distinct layers is significant towards stability. Until such evidence is provided, the Examiner

indicates that one cannot conclude that the separation of the composition in two layers is a direct correlation to instability of the formulation.

In view of the Examiner's comments as set forth above, Applicants submit that the following references teach that separation is deemed an undesired property in the paragraphs regarding "Background Art".

- US 2009/0004124 A1, paragraph [0002]
- US Patent No. 7,455,847, from column 1, line 21 to column 2, line 33
- US Patent No. 7,226,952

In addition to the above references, for example, JP-A-2011-105633 teaches that the separation is deemed undesired property and should be avoided in paragraph [0003], and dispersion stability is included in the evaluation endpoints as an index of long-term storage stability in paragraphs [0070] to [0082]. In this regard, Applicant submits herewith a machine translation of JP-A-2011-105633. A similar evaluation is conducted in JP-A-2011-068615 as well.

As to the Examiner's indication that nothing within the Guidelines document either implies or teaches that the separation observed by Applicant should be avoided, Applicant traverses based on the description at page 5 of the Guidelines document as discussed below.

In particular, Applicant notes that the Guidelines document refers to assuring stability (see the last paragraph on page 1 of the Guidelines document), so this indicates that separation (which is a change in the liquid and thus shows that the liquid is not stable) should be avoided. Also, Applicant notes that page 5 of the Guidelines document refers to de-mixing (separation) in connection with powders and granular products, so this would imply that separation would be a

concern in regard to liquids as well, and thus is another reason why the reference indicates that separation is to be avoided.

As to the Examiner's discussion of Examples 3 and 4 of the instant application, it is noted that Applicant actually discussed Comparative Examples 3 and 4, so the Examiner does not appear to have considered the correct evidence (while the Examiner refers to Examples 3 and 4, the details that he cites appear to relate to Example 3 and Comparative Example 4). Moreover, it is noted that Comparative Examples 3 and 4 do not differ in the concentration (except to compensate for the change in the amount of surfactin) or the addition of other agents, and invention examples such as Examples 7 and 8 in Table 1 on page 28 in the specification also do not differ in the concentration (except to compensate for the change in the amount of surfactin) or the addition of other agents. Accordingly, it is submitted that the evidence in the specification is probative of the unexpected superiority of the claimed invention including the recited surfactin range with respect to the property of stability.

With respect to the unexpected results, Applicant disagrees with the Examiner that the closest prior art to Applicant's invention is the disclosure of Noda and Sakai. As can be seen from the Declaration filed in executed form on July 31, 2009, the Comparative Example (which is within the scope of Yoneda) is identical to Example 1 in Table 1 of the present specification except for using polyoxyethylene (20) sorbitan monostearate (which is a polyoxyethylene sorbitan fatty acid ester as disclosed at page 18, line 17 and, e.g., Formulation Example 2 on page 42 in WO 99/62482) instead of polyoxyethylene glyceryl ether fatty acid ester as in the present invention. While the Examiner asserts that the comparison should be with Noda and Sakai, it is submitted that the purpose of the invention is to improve upon a lipopeptide-containing composition like Yoneda (see the Background Art section on page 1 and the

Disclosure of the Invention section on page 2 in the present application). Since such a lipopeptide-containing composition has a separation problem, the present invention, which is an improvement on that composition, should be compared with that composition, not with a composition like Noda or Sakai which does not even contain a lipopeptide.

Regarding the Examiner's indication that it is unclear what formulation was tested in Yoneda since the Declaration does not identify which example formulation was utilized in the experiment referred to in the declaration, it is submitted that as set forth in MPEP 716.02(e)I., an applicant may compare the claimed invention with prior art that is more closely related to the invention than the prior art relied upon by the examiner. In the present situation, it is submitted that the Comparison Example in the Declaration is identical to Example 1 in Table 1 of the present specification except for using polyoxyethylene (20) sorbitan monostearate (which is a polyoxyethylene sorbitan fatty acid ester as disclosed at page 18, line 17 and, e.g., Formulation Example 2 on page 42 in WO 99/62482) instead of polyoxyethylene glyceryl ether fatty acid ester as in the present invention, and thus is closer to Example 1 of the present application than any Example in Yoneda itself. Further, it is submitted that the Comparison Example in the Declaration is within the scope of Yoneda and thus can adequately represent Yoneda.

With respect to the Examiner's indication that many of the formulations taught in Yoneda et al. would be expected to separate given that many contain an oil component (such as avocado oil or castor oil) and an aqueous component while one would expect that the use of polyoxyethylene glyceryl fatty acid ester would result in a non-separating formulation, it is submitted that the Comparative Example in the Declaration does not include an oil component like avocado oil or castor oil but rather includes polyoxyethylene (20) sorbitan monostearate, which is a polyoxyethylene sorbitan fatty acid ester that one would think would act more like

polyoxyethylene glyceryl fatty acid ester than like an oil component such as avagado oil or castor oil. It is submitted that unexpectedly, though, polyoxyethylene glyceryl fatty acid ester prevents separation of a lipopeptide-containing composition while polyoxyethylene (20) sorbitan monostearate (which is disclosed in Yoneda) does not. Thus, it is submitted that the Examiner's invitation that Applicant demonstrate that the separation observed in Yoneda et al. was also observed in the formulations of Noda et al. is not appropriate.

Accordingly, Applicant submits that the present invention is not obvious over the cited art, and withdrawal of these rejections is respectfully requested.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Date: August 24, 2011

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[Detailed Description of the Invention]

[Field of the Invention]

[0001]

Foaming of this invention is good and it relates to the hair wash constituent which can give a feeling of gloss to the hair after desiccation.

[Background of the Invention]

[0002]

In recent years, female hair is easy to receive the chemical injury by the physical damage with a daily shampoo, a style, a dryer, etc., hair dyeing, bleach, permanent wave processing, etc. in connection with a rise of a clean intention and foppish consciousness. As nonconformity points of the damaged hair, when a shampoo is rinsed, it creaks, and admiration becomes strong, and PASATSUKI of the hair after desiccation, degradation of smoothness, the fall of a feeling of gloss, degradation of easiness to comb, etc. are mentioned.

[0003]

By blending the cationic surface-active agent which is a rinse component, and long-chain aliphatic alcohol into a shampoo composition as a means to solve such nonconformity points. When hair is rinsed, the liquid crystal (a cationic surface-active agent and the association body of long-chain aliphatic alcohol) sticks to hair, and smoothness is revealed, PASATSUKI of the hair after desiccation is controlled, the condition of the hair after desiccation is prepared, and the technology of raising a result feel is proposed (refer to patent documents 1-2). in order that [however,] a cationic surface-active agent and an anionic surface-active agent may form an anion cation complex in the content system of this cationic surface-active agent -- the quantity of an anionic surface-active agent -- many (it is more than about 5 mass %) -- it was a problem at the point that are easy to dissociate and foaming worsens.

[0004]

As a modifier of the bubble of the shampoo composition in the former, the alkanol amide of fatty acid, monoglyceride, various kinds of ionicity polymer, etc. are used, for example (refer to patent documents 3-5). however, if these is blended [the quantity of the grade which it is ineffective if it does not blend so much, and fully has an effect], while shampooing one's hair repeatedly, they were problems at the point of generating stickiness, hardness peculiar to a polymer, and with **.

[0005]

Therefore, the actual condition is that excel in foaming, can give a feeling of gloss to the hair after desiccation, and offer of a hair wash constituent with sufficient segregational stability is called for.

[Citation list]

[Patent literature]

[0006]

[Patent documents 1] JP,2004-292390,A

[Patent documents 2] JP,2006-63044,A

[Patent documents 3] JP,H8-283127,A

[Patent documents 4] JP,H10-273428,A

[Patent documents 5] JP,2004-262805,A

[Summary of Invention]

[Problem to be solved by the invention]

[0007]

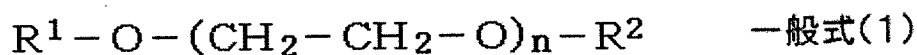
This invention solves said many problems in the former, and makes it problem to attain the following purposes. That is, this invention is excellent in foaming, and can give a feeling of gloss to the hair after desiccation, and an object of this invention is to provide a hair wash constituent with sufficient segregational stability.

[Means for solving problem]

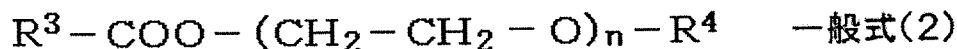
[0008]

In order to solve said problem, this invention person acquired the following knowledge, as a result of inquiring wholeheartedly. To a hair wash constituent, namely, (A) anionic surface-active agent of 5 mass % - 15 mass %, (B) An ampholytic surface active agent, (C) cationic surface-active agent, and (D) long-chain aliphatic alcohol, (E) By making the nonionic surface-active agent of HLB 10-20 expressed with either a following general formula (1) and a following general formula (2) contain at least, The rate of a compounding ratio of that foaming is good, can give a feeling of gloss to the hair after desiccation, and is excellent in segregational stability, the aforementioned (A) ingredient, and the aforementioned (C) ingredient with a mass ratio. (C) It is referred to as $\frac{(A)}{(C)} = 0.07 - 1.00$, and the rate of a compounding ratio of the aforementioned (A) ingredient, the aforementioned (C) ingredient, and the (E) ingredient with a mass ratio. (E) -- by being referred to as $\frac{(A)}{(A)+(C)} = 0.01 - 0.53$, foaming can improve more and good segregational stability can be acquired. In the thing of silicone oil and ester oil liquefied under ordinary temperature made to contain either at least, the knowledge of a feeling of gloss of the hair after desiccation improving was carried out, and it resulted in completion of this invention.

[Chemical formula 1]



[Chemical formula 2]



[0009]

This invention is based on said knowledge by this invention person, and is as follows as said The means for solving a technical problem. namely

<1> (A) anionic surface-active agent,

(B) Ampholytic surface active agent,

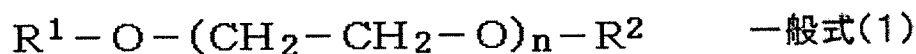
(C) Cationic surface-active agent,

(D) Long-chain aliphatic alcohol,

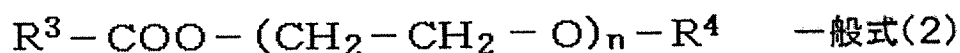
(E) The nonionic surface-active agent of HLB 10-20 expressed with either a following general formula (1) and a following general formula (2),

It is a hair wash constituent which contains even if small, and is characterized by the content of aforementioned (A) anionic surface-active agent being 5 mass % - 15 mass %.

[Chemical formula 3]



[Chemical formula 4]



(R¹ - R⁴ express either the alkyl group of the straight chain of the carbon numbers 12-18, or branched chain, and an alkenyl group among said general formula (1) and said general formula (2), and n is the number of average addition mols of ethyleneoxide, and shows the integer of 3-150.)

<2> The content of the (A) ingredient is a hair wash constituent given in the above <1> which is 7 mass % - 10 mass %.

<3> The content of the (B) ingredient is a hair wash constituent given in either of <2> from the above <1> which is 2.5 mass % - 20 mass %.

<4> The content of the (C) ingredient is a hair wash constituent given in either of <3> from the above <1> which is 0.5 mass % - 5 mass %.

<5> The (D) ingredient is a hair wash constituent given in either of <4> from the above <1> which is with a carbon numbers of 12 or more long-chain aliphatic alcohol.

<6> The content of the (D) ingredient is a hair wash constituent given in either of <5> from the above <1> which is 1 mass % - 10 mass %.

<7> Content of the (E) ingredient is a hair wash constituent given in either of <6> from the above <1> which is 0.05 mass % - 5 mass %.

<8> A rate of a compounding ratio of the (A) ingredient and the (C) ingredient is a mass ratio,

$$(C)/(A)=0.07-1.00$$

It comes out, and it is and also a rate of a compounding ratio of the aforementioned (A) ingredient, the aforementioned (C) ingredient, and the (E) ingredient is a mass ratio,

$$(E)-/[(A)+(C)]=0.01-0.53$$

It comes out and is a hair wash constituent given in either of <7> from a certain above <1>.

<9> A rate of a compounding ratio of the (C) ingredient and the (D) ingredient is a mass ratio,

$$(C)/(D)=0.1-1$$

It comes out and is a hair wash constituent given in either of <8> from a certain above <1>.

It is a hair wash constituent given in either of <9> from the above <1> of <10> silicone oil and ester oil liquefied under ordinary temperature which contains either further at least.

Kinetic viscosity of <11> silicone oil is a hair wash constituent given in the above <10> which is 5 million mm^2/s at least.

[Effect of the Invention]

[0010]

According to this invention, said many problems in the former can be solved, said purpose can be attained, it can excel in foaming, a feeling of gloss can be given to the hair after desiccation, and a hair cleaning composition with sufficient segregational stability can be provided.

[Description of Embodiments]

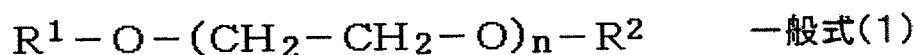
[0011]

(Hair wash constituent)

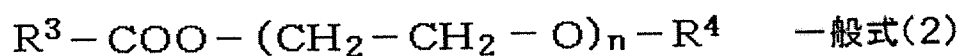
At least the hair wash constituent of this invention (A) anionic surface-active agent, (B) An ampholytic surface active agent, (C) cationic surface-active agent, and (D) long-chain aliphatic alcohol, (E) containing the nonionic surface-active agent of HLB 10-20 expressed with either a following general formula (1) and a following general

formula (2), and accepting necessity -- (F) silicone oil and ester oil liquefied under ordinary temperature -- contain either and other ingredients at least.

[Chemical formula 5]



[Chemical formula 6]



($R^1 - R^4$ express either the alkyl group of the straight chain of the carbon numbers 12-18, or branched chain, and an alkenyl group among said general formula (1) and said general formula (2), and n is the number of average addition mols of ethyleneoxide, and shows the integer of 3-150.)

[0012]

< (A) ingredient: Anionic surface-active agent >

The aforementioned (A) ingredient is used in order to give a feeling of gloss to improvement in foaming, and hair after desiccation.

As the aforementioned (A) ingredient, if it can blend with a hair wash constituent, There is no restriction in particular, can choose suitably according to the purpose, and For example, alkyl sulfate, An alkyl-sulfonic-acid salt, acylation amino acid salt, polyoxyethylene-alkyl-ether sulfate, Alkylbenzene sulfonates, an N-acyl N-methyltaurine salt, alpha-olefin sulfonate, a higher-fatty-acid ester sulfonate, alkyl ether acetate, Polyoxyethylene-alkyl-ether acetate, fatty acid soap, alkyl phosphate, N-lauroyl glutamate, N-palmitoyl glutamate, an N-lauroyl N-ethylglycine salt, an N-lauroyl ZARUKOSHIN salt, N-myristoyl beta-alanine salt, etc. are mentioned. An anionic surface-active agent which has sulfuric acid residues, such as alkyl sulfate, polyoxyethylene-alkyl-ether sulfate, a polyoxyethylene alkenyl ethereal sulfate salt, and a polyoxyalkylene alkylphenyl ethereal sulfate salt, also in these is preferred at a point whose foaming improves.

These anionic surface-active agents may be used by an one-sort independent, and may use two or more sorts together.

[0013]

As content of the aforementioned (A) ingredient, they are 5 mass % - 15 mass % to said hair wash constituent whole quantity. Said content has 7 mass [from a viewpoint of

giving a feeling of gloss to the goodness of foaming, and the hair after desiccation] % - more preferred 10 mass %. The effect which the amount of adsorption to hair becomes less, and gives a feeling of gloss to the hair after desiccation because foaming of a key objective worsens as detergent performance that the content of the aforementioned (A) ingredient is less than 5 mass % and also the quantity of an anion cation complex decreases may not be enough. If the content of the aforementioned (A) ingredient exceeds 15 mass %, rapid thickening may take place and segregational stability and usability may worsen.

[0014]

< (B) ingredient: Ampholytic surface active agent >

As the aforementioned (B) ingredient, there is no restriction in particular and it can choose suitably according to the purpose, For example, an alkyl betaine series active agent, an amide betaine series active agent, a sulfobetaine system active agent, A hydroxy sulfobetaine system active agent, an amide sulfobetaine system active agent, a phosphobetaine system active agent, an imidazolinium betaine system active agent, an aminopropionic acid system active agent, an amino acid system active agent, etc. are mentioned. Also in these, a lauric acid amide propylbetaine, lauryldimethyl betaine aminoacetate, Betaine series surface-active agents, such as a palm-oil-fatty-acid amide propylbetaine, a palm-oil-fatty-acid dimethylamino acetic acid betaine, lauryl hydroxy sulfobetaine, and 2-alkyl N-carboxymethyl N-hydroxyethyl imidazolinium betaine, are preferred. These may be used by an one-sort independent and may use two or more sorts together.

Although there is no restriction in particular and it can choose suitably as content in said hair wash constituent of the aforementioned (B) ingredient according to the purpose, 2.5 mass % - 20 mass % are preferred, from a viewpoint of giving a feeling of gloss to goodness of foaming, and hair after desiccation, 5 mass % - 15 mass % are more preferred, and 8 mass % - especially 15 mass % are preferred. Since foaming of a key objective worsens as detergent performance that content of the aforementioned (B) ingredient is less than 2.5 mass %, an effect with a sufficient bubble which does not cross but gives a feeling of gloss to hair after desiccation may not be enough for hair, and also segregational stability may worsen. If content of the aforementioned (B) ingredient exceeds 20 mass %, segregational stability may worsen.

It is a point of goodness of foaming that more than 15 mass % contains in said hair wash constituent, and a total amount of the aforementioned (A) ingredient and the aforementioned (B) ingredient has it. [preferred]

[0015]

< (C) ingredient: Cationic surface-active agent >

As the aforementioned (C) ingredient, if it can blend with a hair wash constituent, there is no restriction in particular and it can choose suitably according to the purpose, but a cationic surface-active agent which has a with a carbon numbers of 12 or more hydrocarbon group is preferred. There is a skin stimulus that a carbon number of the aforementioned (A) ingredient is less than 12, and it may be hard to carry out association body (liquid crystal) formation with long-chain aliphatic alcohol. These cationic surface-active agents may be used by an one-sort independent, and may use two or more sorts together.

The cationic surface-active agent which has a with a carbon numbers [said] of 12 or more hydrocarbon group may be divided by functional groups, such as -O-, -CONH-, and -COO-, for example. In this Description, the carbon number of functional groups, such as -CONH- and -COO-, is included in said carbon number 12.

[0016]

As a cationic surface-active agent which has a with a carbon numbers [said] of 12 or more hydrocarbon group, If it can blend with a hair wash constituent, there is no restriction in particular and it can choose suitably according to the purpose, For example, the alkyl quarternary ammonium salt expressed with a following general formula (3), Quarternary ammonium salt, the amide amine type surface-active agent, amine type surface-active agent and guanidine derivative which have at least one ester group thru/or its salt, an amino acid system cationic surface-active agent, etc. are suitably used for the intramolecular expressed with either a following general formula (4), (6) and (8).

[0017]

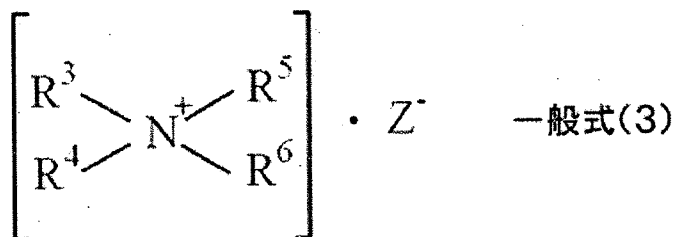
- Alkyl quarternary ammonium salt -

As said alkyl quarternary ammonium salt, There is no restriction in particular, can choose suitably according to the purpose, and For example, a hydrochloride, Mineral, such as bromate, sulfate, and an phosphate; organic acid salt, such as glycol acid chloride, acetate, a lactate, succinate, a tartrate, citrate, an acidic-amino-acid salt, higher fatty acid salt, a pyroglutamic acid salt, and a p-toluenesulfonic-acid salt, etc. are mentioned. Also in these, the compound expressed with a following general formula (3) is preferred as said alkyl quarternary ammonium salt.

The (A) ingredient containing said alkyl quarternary ammonium salt is usually contained in the form of a salt.

[0018]

[Chemical formula 7]



At least one of R^3 and the R^4 is the alkyl group or alkenyl group of a straight chain or branched chain among said general formula (3). Also in these, said R^3 and especially R^4 have a preferred straight chained alkyl group. Either said R^3 or R^4 may be a methyl group or an ethyl group. Said R^3 and R^4 may be the same respectively, and may differ from each other.

as the carbon number of said R^3 and R^4 -- said R^3 and R^4 -- at least, 12-28 have preferred either, 16-24 are more preferred, and 22 is still more preferred.

R^5 and R^6 may be a methyl group or an ethyl group, may be the same respectively, and may differ from each other.

Z^- expresses an anion, for example, $CH_3SO_4^-$, $C_2H_5SO_4^-$, Cl^- , Br^- , etc. are mentioned.

[0019]

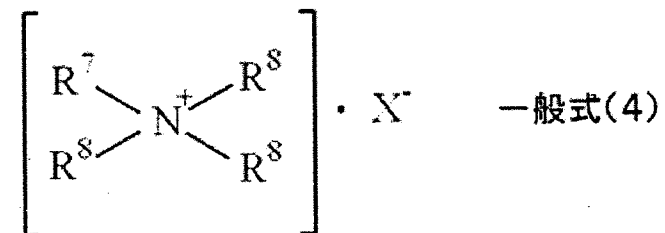
As the 4th class of alkyl ammonium expressed with said general formula (3), chloridation behenyl trimethylammonium, dibehenyl dimethyl ammonium chloride, etc. are mentioned, for example.

[0020]

- Quarternary ammonium salt -

As quarternary ammonium salt which contains at least one ester group in said intramolecular, a compound expressed with a following general formula (4) is mentioned suitably.

[Chemical formula 8]



R^7 is an alkyl group or an alkenyl group of a straight chain or branched chain which

contains preferably one - at least one ester group [three] among said general formula (4).

As a carbon number of said R^7 , 12-26 are preferred.

R^8 shows either a methyl group, an ethyl group and a hydroxyalkyl group of the carbon numbers 1-4. Said R^8 may be the same respectively and may differ.

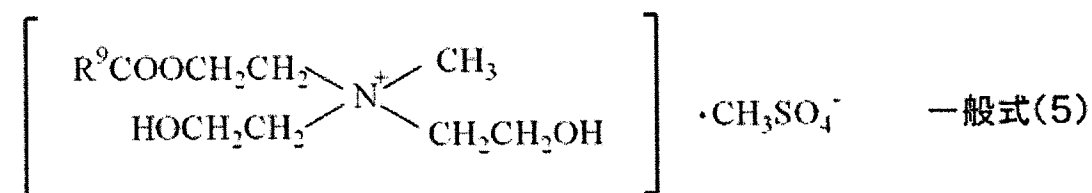
Said R^7 and R^8 may be the same respectively, and may differ from each other.

X^- expresses an anion, for example, $CH_3SO_4^-$, $C_2H_5SO_4^-$, Cl^- , Br^- , etc. are mentioned.

[0021]

As quarternary ammonium salt which contains one ester group in intramolecular, a compound expressed with a following general formula (5) is mentioned.

[Chemical formula 9]

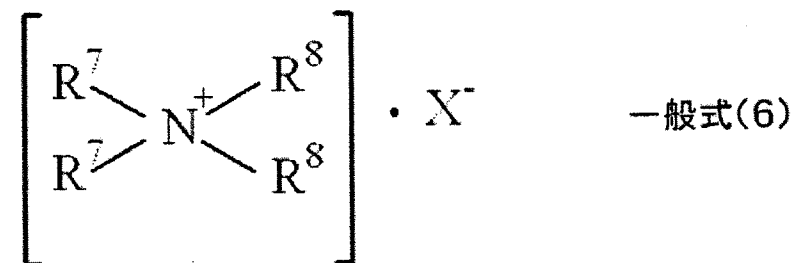


R^9 shows an alkyl group or an alkenyl group of the carbon numbers 9-23 of a straight chain or branched chain among said general formula (5). Also in these, said R^9 has preferred alkyl group or alkenyl group of the carbon numbers 13-21 of a straight chain. As for said R^9 , specifically, it is preferred that it is the residue excluding a carboxyl group from fatty acid, such as stearic acid, palmitic acid, myristic acid, oleic acid, and elaidic acid.

[0022]

As quarternary ammonium salt which contains two ester groups in intramolecular, a compound expressed with a following general formula (6) is mentioned.

[Chemical formula 10]

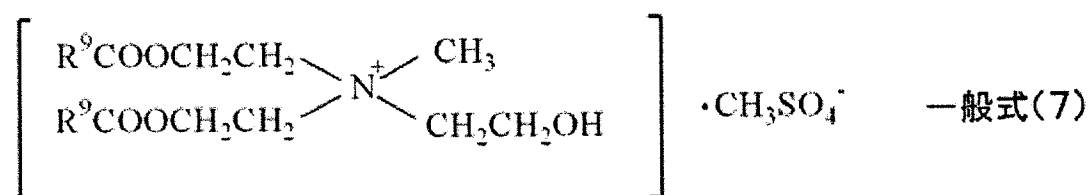


R^7 , R^8 , and X^- show the same meaning as said general formula (4) among said general

formula (6). Said R^7 and R^8 may be the same respectively, and may differ from each other.

Also in these, a compound expressed with a following general formula (7) is preferred as quarternary ammonium salt which contains two ester groups in intramolecular.

[Chemical formula 11]



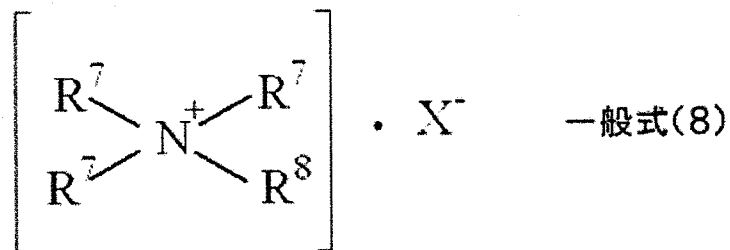
R^9 shows the same meaning as said general formula (5) among said general formula (7). Said R^9 may be the same respectively and may differ.

Said R^9 has preferred alkyl group or alkenyl group of the carbon numbers 13-21 of a straight chain. As for said R^9 , specifically, it is preferred that it is the residue excluding the carboxyl group from fatty acid, such as stearic acid, pulmitic acid, myristic acid, oleic acid, and elaidic acid.

[0023]

As quarternary ammonium salt which contains three ester groups in intramolecular, the compound expressed with a following general formula (8) is mentioned.

[Chemical formula 12]

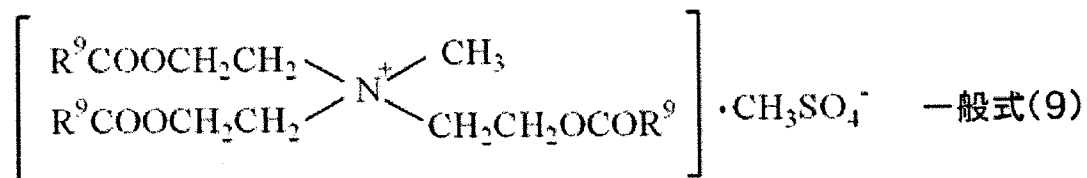


R^7 , R^8 , and X^- show the same meaning as the inside of said general formula (4) among said general formula (8).

Said R^7 and R^8 may be the same respectively, and may differ from each other.

Also in these, the compound expressed with a following general formula (9) is preferred as quarternary ammonium salt which contains three ester groups in intramolecular.

[Chemical formula 13]



R⁹ shows the same meaning as said general formula (5) among said general formula (9). Said R⁹ may be mutually the same and may differ. Said R⁹ has preferred alkyl group or alkenyl group of the carbon numbers 13-21 of a straight chain. As for said R⁹, specifically, it is preferred that it is the residue excluding the carboxyl group from fatty acid, such as stearic acid, pulmitic acid, myristic acid, oleic acid, and elaidic acid.

[0024]

R⁷ in said general formula (3) - (9), R⁸, R⁹ and X⁻, and R⁷ in other formulas, R⁸, R⁹ and X⁻ are independent respectively.

[0025]

Said R⁹ is the residue excluding the carboxyl group from fatty acid of the carbon numbers 10-24, and it is still more preferred that it is a basis of saturated fatty acid, unsaturated fatty acid, straight-chain fatty acid, and a branched chain fatty acid derived either.

When said R⁹ is unsaturated fatty acid, the Sis object and a transformer object exist. Although there is no restriction in particular and it can choose suitably according to the purpose as a ratio (the Sis object / transformer object) of said Sis object and a transformer object, it is a mass ratio, and 25 / 75 - 80/20 are preferred, and 40 / 60 - 80/20 are more preferred.

As fatty acid used as the basis of said R⁹, stearic acid, pulmitic acid, myristic acid, lauric acid, oleic acid, elaidic acid, linolic acid, partially-hydrogenated palm oil fatty acid (iodination 10-60), partially-hydrogenated beef tallow fatty acid (iodination 10-60), etc. are mentioned, for example. also in these, oleic acid, elaidic acid, linolic acid, stearic acid, etc. are preferred -- the stearic acid of vegetable origin, pulmitic acid, myristic acid, oleic acid, elaidic acid, etc. -- ** -- it is especially preferred to combine a fixed quantity.

Although there is no restriction in particular and it can choose suitably as said combination according to the purpose, The ratio (saturated fatty acid/unsaturated fatty acid) of saturated fatty acid and unsaturated fatty acid with a mass ratio. Are 95 / 5 - 50/50, and the ratio (the Sis object / transformer object) of the Sis object and a transformer object with a mass ratio. It is 40 / 60 - 80/20, and the ratio of the carbon

number 18 is more than 60 mass %, and it is preferred to use the fatty acid composition which prepared fatty acid of the carbon number 20 so that below 1 mass % might become [below 2 mass %] about carbon number 22 fatty acid.

[0026]

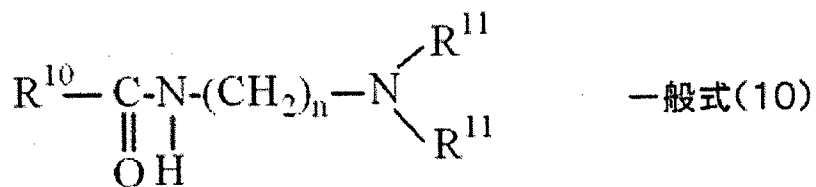
As a synthesizing method of the quarternary ammonium salt which contains one - three ester groups in said intramolecular, There is no restriction in particular, and it can choose suitably according to the purpose, for example, the method of compounding by the condensation reaction of said fatty-acid-composition thing or a fatty acid methyl ester constituent, and triethanolamine and the 4th according to the 4th class-ized reagents, such as dimethyl sulfate, continuously class-ized reaction, etc. are mentioned.

[0027]

- An amide amine type surface-active agent -

As said amide amine type surface-active agent, a compound expressed with a following general formula (10) is mentioned, for example.

[Chemical formula 14]



R^{10} is an alkyl group or an alkenyl group of a straight chain or branched chain among said general formula (10).

As a carbon number of said R^{10} , 11-27 are preferred, 15-23 are more preferred, and 21 is still more preferred.

R^{11} -- an alkyl group of the carbon numbers 1-4 -- they are a methyl group or an ethyl group preferably.

n shows an integer of 2-4.

[0028]

As an amide amine type surface-active agent expressed with said general formula (10), For example, stearic acid diethylaminoethyl amide, stearic acid dimethylaminoethyl amide, Pulmitic acid diethylaminoethyl amide, palm oil fat fatty acid diethylamino propylamide, Pulmitic acid dimethylaminoethyl amide, myristic acid diethylaminoethyl amide, Myristic acid dimethylaminoethyl amide, behenic acid diethylaminoethyl amide, Behenic acid dimethylaminoethyl amide, stearic acid diethylamino propylamide, Stearic acid dimethylaminopropylamide, pulmitic acid diethylamino propylamide, Pulmitic acid

dimethylaminopropylamide, myristic acid diethylamino propylamide, myristic acid dimethylaminopropylamide, behenic acid diethylamino propylamide, behenic acid dimethylaminopropylamide, etc. are mentioned. These may be used by an one-sort independent and may use two or more sorts together.

Also in these, as said amide amine type surface-active agent, Stearic acid dimethylaminopropylamide, stearic acid diethylaminoethyl amide, behenic acid diethylaminoethyl amide, behenic acid dimethylaminopropylamide, especially steer ROKISHI propyldimethylamine, etc. are preferred.

[0029]

These surface-active agents are usually contained in the form of various above-mentioned salts. Also in these, the form of an acidic-amino-acid salt, citrate, and a hydrochloride is preferred.

The salt used for neutralization may be used by an one-sort independent, and may use two or more sorts together.

[0030]

- Amine type surface-active agent -

As said amine type surface-active agent, steer ROKISHI propyldimethylamine etc. are mentioned, for example.

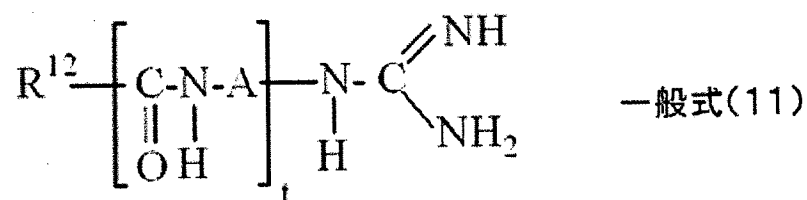
Said amine type surface-active agent is usually contained in the form of a salt. Also in these, the form of an acidic-amino-acid salt, citrate, and a hydrochloride is preferred. The salt used for neutralization may be used by an one-sort independent, and may use two or more sorts together.

[0031]

- A guanidine derivative thru/or its salt -

As said guanidine derivative thru/or its salt, the guanidine derivative expressed with a following general formula (11) thru/or its salt are mentioned.

[Chemical formula 15]



R¹² shows the alkyl group or alkenyl group of a straight chain or branched chain among said general formula (11).

As a carbon number of said R¹², 11-27 are preferred and 11-21 are more preferred.

A shows a straight chain, a branched-chain alkylene group, or an alkenylene group.

Although there is no restriction in particular and it can choose suitably as a carbon number of said A according to the purpose, 1-10 are preferred.

t is an integer of 1-5, and when t is two or more, A under each block may be mutually the same, and may differ.

[0032]

As said R^{12} , for example $C_{11}H_{23}-$, $C_{12}H_{25}-$, $C_{13}H_{27}-$, $C_{14}H_{29}-$, $C_{15}H_{31}-$, $C_{16}H_{33}-$, $C_{17}H_{35}-$, $2(C_8H_{17})CH-$, $4-C_2H_5C_{15}H_{30}-$, etc. are mentioned.

As for A used as the substituent in said general formula (11), a methylene group, ethylene, a propylene group, a butylene group, a pentylene group, a hexylene group, an isopropanal pyrene group, 2-pentenyl group, 2-ethyl butylene group, etc. are mentioned, for example.

[0033]

A guanidine derivative expressed with said general formula (11) is usually contained in a form of various above-mentioned salts. Also in these, a form of a hydrochloride, bromate, acetate, glycol acid chloride, citrate, and an acidic-amino-acid salt is preferred.

[0034]

- An amino acid system cationic surface-active agent -

Although there is no restriction in particular and it can choose suitably as said amino acid system cationic surface-active agent according to the purpose, a mono-N-long chain (carbon numbers 12-22) acyl basic-amino-acid low-grade (carbon numbers 1-8) alkyl ester salt etc. are mentioned, for example.

As basic amino acid which constitutes said amino acid system cationic surface-active agent, natural amino acid, such as ornithine, ricin, and arginine, etc. are mentioned, for example. Synthetic amino acid like alpha and gamma-diaminobutyric acid can also be used. These may be optically active substances and may be racemate.

[0035]

As an acyl group of said amino acid system cationic surface-active agent, a carbon number is a higher-fatty-acid residue of saturation of 12-22, or an unsaturation. Said acyl group may also be a natural thing, and may be compounded. Specifically, as for said acyl group, natural mixed higher-fatty-acid residues, such as single fatty-acid-residue; palm-oil-fatty-acid residues, such as a lauroyl group, a myristoyl group, a palmitoyl group, and a stearyl group, and a beef tallow higher-fatty-acid residue, etc. are mentioned, for example.

[0036]

Although there is no restriction in particular and it can choose suitably as said lower-alkyl-ester ingredient according to the purpose, Methyl ester, ethyl ester, propyl

ester, butylester, pentyl ester, hexyl ester, heptyl ester, octyl ester, etc. are preferred. Said lower-alkyl-ester ingredient is usually contained in a form of a salt. Specifically, organic acid salt, such as mineral; glycol acid chloride, such as a hydrochloride, bromate, sulfate, and an phosphate, acetate, a lactate, succinate, a tartrate, citrate, an acidic-amino-acid salt, higher fatty acid salt, a pyroglutamic acid salt, and a p-toluenesulfonic-acid salt, etc. are mentioned, for example. Also in these, a form of a hydrochloride, L- or DL-pyrrolidone-carboxylic-acid salt, and an acidic-amino-acid salt is preferred.

[0037]

Quarternary ammonium salt which has at least one ester group in above-mentioned alkyl quarternary ammonium salt and intramolecular as the aforementioned (C) ingredient, An amide amine type surface-active agent, an amine type surface-active agent, a guanidine derivative, or its salt, And also in an amino acid system cationic surface-active agent, alkyl quarternary ammonium salt is preferred, and chloridation behenyl trimethylammonium and stearyl chloride trimethylammonium are the points which can give a feeling of gloss of hair after desiccation, and are especially preferred.

[0038]

Although there is no restriction in particular and it can choose suitably according to the purpose as a total content of the aforementioned (C) ingredient in said hair wash constituent, 1 mass [from a viewpoint to which 0.5 mass % - 5 mass % give a feeling of gloss preferably to the goodness of foaming and the hair after desiccation to the hair wash constituent whole quantity] % - 4 mass % are more preferred.

If foaming and segregational stability worsen that the content of the aforementioned (C) ingredient is less than 0.5 mass %, a feeling of gloss may be unable to be given to the hair after desiccation and 5 mass % is exceeded, a feeling of gloss of the hair after desiccation may fall, and segregational stability may be inferior.

[0039]

Although there is no restriction in particular and it can choose suitably in said hair wash constituent according to the purpose as a rate of a compounding ratio of the aforementioned (A) ingredient and the aforementioned (C) ingredient, 0.07-1.00 are preferred and 0.14-0.60 are more preferred from a viewpoint of the goodness of foaming, and the quantity of a bubble at a mass ratio ((C) / (A)). The above (C) If a feeling of gloss of foaming and the hair after desiccation may worsen that / (A) is less than 0.07 and 1.00 is exceeded, a feeling of gloss of the hair after desiccation and segregational stability may worsen.

[0040]

< (D) ingredient: Long-chain-aliphatic-alcohol >

If the aforementioned (D) ingredient can be blended with a hair wash constituent, there is no restriction in particular and it can choose suitably according to the purpose, but with a carbon numbers of 12 or more long-chain aliphatic alcohol is preferred. These long-chain aliphatic alcohol may be used by an one-sort independent, and may be used together two or more sorts.

Into [that it is with a carbon numbers of 12 or more long-chain aliphatic alcohol] said hair wash constituent, the aforementioned (D) ingredient can form a liquid crystal structure by the aforementioned (A) ingredient and independent. As with a carbon numbers [said] of 12 or more long-chain aliphatic alcohol, long-chain aliphatic alcohol etc. which are expressed with a following general formula (12) are mentioned, for example.

[Chemical formula 16]



Among said general formula (12), R^{13} expresses a with a carbon numbers of 12 or more aliphatic hydrocarbon group, and shows either of alkyl groups and alkenyl groups of a straight chain or branched chain of the carbon numbers 12-24, especially the carbon number 22 preferably. Also in these, said especially R^{13} has a preferred straight chained alkyl group.

[0041]

As with a carbon numbers of 12 or more expressed with said general formula (12) alcohol, For example, myristyl alcohol, cetyl alcohol, 2-hexyldecyl alcohol, The cetostearyl alcohol, stearyl alcohol, isostearyl alcohol, Octyldodecyl alcohol, an arak RUARU call, behenyl alcohol, hardening rapeseed oil alcohol, oleyl alcohol, elaidyl alcohol, linoleyl alcohol, a KARUNABIRUA record, ceryl alcohol, cholesterol, a phytosterol, etc. are mentioned. the inside of these -- alcohol (cetyl alcohol.) of the carbon numbers 16-22 of the viewpoint of segregational stability to a straight chain Stearyl alcohol, behenyl alcohol, etc. are preferred, a feeling of gloss can be given to the hair after desiccation, and especially nil alcohol is preferred to stearyl alcohol from a point with sufficient segregational stability, and **.

[0042]

Although there is no restriction in particular and it can choose suitably as content in said hair wash constituent of the aforementioned (D) ingredient according to the purpose, 1 mass % - 10 mass % are preferred, and 4 mass [from viewpoints of the goodness where a bubble forms, a feeling of gloss of the hair after desiccation, segregational stability,

etc.] % - 8 mass % are more preferred. If the goodness where a bubble forms that the content of the aforementioned (D) ingredient is less than 1 mass %, a feeling of gloss of the hair after desiccation, segregational stability, etc. may be unable to be given and 10 mass % is exceeded, segregational stability may worsen.

[0043]

Although there is no restriction in particular and it can choose suitably according to the purpose as a rate of a compounding ratio ((C) / (D)) of the aforementioned (C) ingredient and the aforementioned (D) ingredient, The viewpoint which 0.1-1 are preferred, they form an association body (liquid crystal), and becomes easy to stick to hair and whose feeling of gloss of the hair after desiccation improves with a mass ratio to 0.16-0.6 are more preferred. The above (C) If in addition to the ability not to give a feeling of gloss to the hair after desiccation as / (D) is less than 0.1 segregational stability may worsen and exceeds 1, a feeling of gloss of the hair after desiccation and segregational stability may worsen.

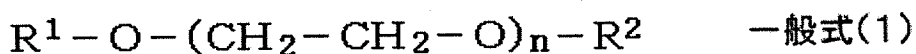
[0044]

< (E) ingredient: Nonionic surface-active agent >

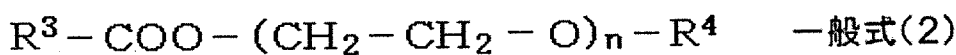
The aforementioned (E) ingredient is mainly given in order to raise the goodness of foaming, and segregational stability.

The aforementioned (E) ingredient is a nonionic surface-active agent of HLB 10-20 expressed with either a following general formula (1) and a following general formula (2).

[Chemical formula 17]



[Chemical formula 18]



(R¹ - R⁴ express either the alkyl group of the straight chain of the carbon numbers 12-18, or branched chain, and an alkenyl group among said general formula (1) and said general formula (2), and n is the number of average addition mols of ethyleneoxide, and shows the integer of 3-150.)

[0045]

The nonionic surface-active agent expressed with said general formula (1) is an ether

type, and the nonionic surface-active agent expressed with said general formula (2) is an ester type.

The aforementioned (E) ingredient is a 2 chain type nonionic surface-active agent which has either of the alkyl groups and alkenyl groups of the straight chain of the carbon numbers 12-18, or branched chain in both ends. n is the number of average addition mols of ethyleneoxide, and is an integer of 3-150.

[0046]

Specifically, the aforementioned (E) ingredient is polyoxyethylene cetostearyl hydroxy MIRISUCHIREN ether (60 EO), for example. In HLB17, ERUFAKOSUGT282S (made by lion Akzo, Inc.), and the Japan emulsion incorporated company make. A JIRAURIN acid polyethylene glycol (12EO, HLB=10, EMALX600 di-L), A JIRAURIN acid polyethylene glycol (20EO, HLB=12, EMALX1000 di-L) and a distearic acid polyethylene glycol (150EO, HLB=20, EMALX6300 DI-ST) are preferred. These may be used by an one-sort independent and may use two or more sorts together.

[0047]

If said HLB is 10-20, there is no restriction in particular and it can choose suitably according to the purpose, but viewpoints of goodness of foaming, a feeling of gloss of hair after desiccation, segregational stability, etc. to 12-17 are more preferred. If a feeling of gloss of foaming and hair after desiccation may worsen that said HLB is less than ten and HLB20 is exceeded, segregational stability may worsen.

[0048]

Although there is no restriction in particular and it can choose suitably as content in said hair wash constituent of the aforementioned (E) ingredient according to the purpose, 0.05 mass % - 5 mass % are preferred, and 0.2 mass [from a viewpoint of goodness of foaming and quantity of a bubble] % - 2 mass % are more preferred. If foaming and segregational stability may worsen that the aforementioned (E) ingredient is less than 0.05 mass % and 5 mass % is exceeded, viscosity may become high, and segregational stability and usability may worsen, and also an effect which gives gloss to hair may fall.

[0049]

Although there is no restriction in particular and it can choose suitably according to the purpose as a rate of a compounding ratio of the aforementioned (A) ingredient, the (C) ingredient, and the (E) ingredient, a mass ratio -- (E) -- / -- [(A) -- + -- (C) --] -- = -- 0.01 - 0.53 -- desirable -- foaming -- goodness -- segregational stability -- etc. -- a viewpoint -- from -- 0.02 - 0.25 -- it is desirable . if foaming and segregational stability may worsen that said mass ratio ((E) -- / -- [(A) -- + -- (C) --]) is less than 0.01 and 0.53 is exceeded, a feeling of gloss of hair after desiccation and segregational stability may worsen.

[0050]

HLB of the aforementioned (D) ingredient can be calculated by "the upriver formula" shown below.

HLB value = $7 + 11.7 \log (Mw/Mo)$

(Mw shows the molecular weight of the hydrophilic portion of the (D) ingredient.) Mo shows the molecular weight of the lipophilic portion of the (D) ingredient.

[0051]

< (F) ingredient: Silicone oil and liquefied under ordinary temperature ester-oil >

(F) An ingredient is mainly given in order to give a feeling of gloss to the hair after desiccation. ester oil with the aforementioned (F) ingredient liquefied under silicone oil and ordinary temperature -- at least -- either -- it is . Here, ordinary temperature means the range of 15 ** - 25 **.

[0052]

- Silicone oil -

Although there is no restriction in particular and it can choose suitably as said silicone oil according to the purpose, high polymerization dimethylpolysiloxane and its emulsion, an amino gum silicone kind, etc. are mentioned.

[0053]

As kinetic viscosity at 25 ** of said high polymerization dimethylpolysiloxane and its emulsion, 5 million mm^2/s - 30 million- mm^2/s are preferred, and 10 million mm^2/s - 30 million- mm^2/s are more preferred at the point which gives a feeling of gloss to the hair after desiccation.

As said high polymerization dimethylpolysiloxane and its emulsion, For example, the kinetic viscosity at 25 ** is mentioned for the thing more than 5 million- mm^2/s , its emulsion, etc. among dimethylsiloxane, such as trimethylsilyl group end dimethylpolysiloxane and silanol group end dimethylpolysiloxane. These may be used by an one-sort independent and may use two or more sorts together.

Said silicone oil can also be used combining other silicone compounds (for example, dimethylpolysiloxane of low kinetic viscosity, cyclic silicone, EO denaturation silicone, amino modifying silicone, etc.).

[0054]

said silicone oil -- concrete -- the silicone emulsion A (on the other hand -- : by shrine oil and fat industry incorporated company -- a silicone emulsion (6).) Dimethyl silicone kinetic viscosity 10 million mm^2/s , solid conversion 9 mass %, the silicone emulsion B (the Shin-etsu chemistry incorporated company make: KM-903, silicone oil dimethyl silicone, and kinetic viscosity 20 million mm^2/s , solid conversion 18 mass %), etc. are mentioned.

[0055]

As said amino gum silicone, specifically, as for example, a high polymerization amino gum emulsion -- X-52-2328 (: by Shin-etsu chemistry incorporated company -- aminopropyl dimethicone.) solid content 12 mass % and X-52-2362 (: by Shin-etsu chemistry incorporated company -- aminopropyl dimethicone.) Solid content 12 mass %, KF-8017 (the Shin-etsu chemistry incorporated company make: solid content 10 mass %), KF-8018 (the Shin-etsu chemistry incorporated company make: solid content 10 mass %), KF-8020 (the Shin-etsu chemistry incorporated company make: solid content 20 mass %), etc. are mentioned.

[0056]

As a measuring method of kinetic viscosity, it can measure by a method shown below, for example.

A toluene solution of silicone of 1g / 100mL concentration is prepared, and specific viscosity η_{sp} (25 **) is calculated by the following formula (1). Next, it substitutes for an expression of relations of Huggins shown in the following formula (2), and asks for intrinsic viscosity $[\eta]$. Huggins constants are Nakamuta, the Chemical Society of Japan, and 77. A thing of a description is used for 588 [1956]. Next, $[\eta]$ is substituted for an equation of A.Kolorlov shown in the following formula (3), and a molecular weight is calculated. Finally M can be substituted for an equation of A.J.Barry shown in the following formula (4), and it can ask for the kinetic viscosity η of silicone.

$\eta_{sp}=(\eta/\eta_0)-1$... A formula (1)

$\eta_{sp}=[[\eta]+K][\eta]^2$... A formula (2)

$[\eta]=0.215 \times 10^{-4} M^{0.65}$... A formula (3)

$\log \eta = 1.00 + 0.0123 M^{0.5}$... A formula (4)

η_0 shows viscosity of toluene among said formula (1), and η shows viscosity of a solution.

The above η_0 and η is measured based on the 1st method of a Standards-of-Cosmetic-Ingredients General Test Procedures viscosity determination.

[0057]

- Liquefied ester oil -

As liquefied ester oil, at said ordinary temperature, specifically, For example, JIKAPURIN acid propylene glycol, monocaprylic acid propylene glycol, JIKAPURIRU acid propylene glycol, sorbitan sesquioleate, Lactic acid octyldodecyl, lauric acid hexyl, octanoic acid myristyl, Octanoic acid palmityl, octanoic acid stearyl, isooctane acid Sept Iles, Isononyl isononanoate and tridecyl isononanoate, myristic acid isopropyl, Myristic acid butyl, myristic acid myristyl, MICHISUCHIN acid di(2-octyldodecyl), Myristic acid 2-hexyldecyl, stearic acid 2-hexyldecyl, Pulmitic acid isopropyl, pulmitic acid

isostearyl, pulmitic acid octyl, Pulmitic acid 2-hexyldecyl, cetyl palmitate, methyl stearate, Butyl stearate, stearic acid hexyl, stearic acid octyl, Stearic acid stearyl and 2-hexyldecyl isostearate, isopropyl isostearic acid, hydroxystearic acid octyl, ethyl oleate, oleic acid oleyl, oleic acid octyldodecyl, octyl eicosenate, lanolin fatty acid isopropyl, Lanolin fatty acid octyldodecyl, ethyl linoleate, isopropyl linolate, Succinic acid dioctyl, succinic acid diethoxyethyl, adipic acid diisopropyl, Dimer acid diisopropyl, diethyl sebacate, diisopropyl sebacate, malate diisostearyl, tri citrate 2-ethylhexyl, adipic acid 2-heptylundecyl, succinic acid diethoxyethyl, caprylic acid propylheptyl, etc. are mentioned.

[0058]

Also in these the aforementioned (F) ingredient from a viewpoint which gives a feeling of gloss to the hair after desiccation. The thing more than 5 million- mm^2/s has preferred kinetic viscosity, and the silicone emulsion (6) high-polymerization amino gum silicone (X-52-2328) and caprylic acid propylheptyl more than 10 million- mm^2/s are more preferred.

[0059]

As a using form of the aforementioned (F) ingredient, there is no restriction in particular, and it can choose suitably according to the purpose, for example, oil, an emulsion, etc. are mentioned.

As the emulsifier and the emulsification method in emulsion-izing of the aforementioned (F) ingredient, there is no restriction in particular and it can choose suitably according to the purpose.

[0060]

Although there is no restriction in particular and it can choose suitably as content in said hair wash constituent of the aforementioned (F) ingredient according to the purpose, 0.1 mass [from a viewpoint whose feeling of gloss of the hair after desiccation improves] % - 2.5 mass % are more preferred, without 0.1 mass % - 3 mass % being preferred, and changing the goodness of foaming from a viewpoint of giving a feeling of gloss to the hair after desiccation. The effect which gives a feeling of gloss to the hair after desiccation as the aforementioned (F) ingredient is less than 0.1 mass % may be insufficient, and if 3 mass % is exceeded, foaming and segregational stability may worsen.

[0061]

<Other ingredients>

Various addition ingredients, perfume, a perfume composition, etc. which restriction in particular does not have, and are the ranges which do not spoil the effect of this invention, and can choose suitably as an ingredient of said others according to the

purpose, for example, are used widely by the common hair wash constituent are mentioned.

As said addition ingredient, there is no restriction in particular and it can choose suitably according to the purpose, For example, hydrocarbon, such as a liquid paraffin and squalane; Camellia oil, oil of almonds, Vegetable oil, such as jojoba oil; Polyoxyethylene alkyl ether, the glycerine fatty acid ester except the (E) ingredient, Nonionic surface-active agents, such as sucrose fatty acid ester and polyglyceryl fatty acid ester except the (D) ingredient (1 chain type nonionic surface-active agent); A gallic acid derivative, Amino acid, such as a glycine, serine, and arginine; Pyrrolidone carboxylic acid and a salt, Antiphlogistics, such as a crude drug, a vitamin, dipotassium glycyrrhizinate, and glycyrrhetic acid; Piroctone olamine, Dandruff stop agents, such as zinc pilus thione; Isopropyl methyl phenol, Germicides, such as triclosan; Tar dye, an ultraviolet ray absorbent, an antioxidant, solvent [, such as ethanol,]; -- anionic polymer [, such as acrylic acid series polymer,]; -- nonionic polymer [, such as vinyl-pyrrolidone system polymer,]; -- both sexes polymer [, such as diaryl chloride dimethylanmonium / acrylic acid,]; -- cation-ized cellulose. Cationic polymer, such as a cation-ized guar gum; Organic granular materials, such as inorganic powder; nylon, such as anhydrous silica and magnesia silica, and polyethylene, **** is mentioned. These addition ingredients may be used by an one-sort independent, and may use two or more sorts together.

[0062]

As perfume used for a hair wash constituent of this invention, and a perfume composition, solvents for perfume etc. which were indicated to a paragraph number [0050], such as a perfume component indicated to paragraph number [0021][of JP,2003-300811,A] - [0035], are mentioned. A "perfume composition" as used in this invention means a mixture which consists of the aforementioned perfume component, a solvent, a perfume stabilizing agent, etc.

Content of said solvent for perfume has 0.1 mass % - preferred 99 mass % to the perfume composition whole quantity, and 1 mass % - 50 mass % are more preferred.

As said perfume stabilizing agent, dibutylhydroxytoluene, butylhydroxyanisole, vitamin E or its derivative, a catechin compound, a flavonoid compound, a polyphenol compound, etc. are mentioned, for example. Also in these, especially dibutylhydroxytoluene is preferred.

Content of said perfume stabilizing agent has 0.0001 mass % - preferred 10 mass % to said perfume composition whole quantity, and its 0.00 mass %1 - 5 mass % is more preferred.

Content of said perfume composition has 0.005 mass % - preferred 40 mass % to said

hair wash constituent whole quantity, and 0.01 mass % - 10 mass % are more preferred.

[0063]

<Manufacturing method>

In an 80 ** water bath, the hair wash constituent of this invention carries out the mixture solution of the aforementioned (C) ingredient and the water-soluble materials containing the aforementioned (D) ingredient, makes them the aqueous phase, and adds and mixes homogenously the oil phase which contains the aforementioned (F) ingredient in this aqueous phase the aforementioned (A) ingredient, the aforementioned (B) ingredient and the aforementioned (E) ingredient, and also if needed. Then, it can prepare by cooling to a room temperature, stirring. As equipment used for said stirring, there is no restriction in particular, and it can choose suitably according to the purpose, for example, a stirring child, stirring feather, etc. are mentioned.

[0064]

-pH-

Although there is no restriction in particular and it can choose suitably as pH of said hair wash constituent according to the purpose, it is 25 ** and 5.0-6.0 are preferred.

Said pH can measure said hair wash constituent at 25 ** using a pH meter (the DKK-TOA CORP. make, HM-30G).

pH of said hair wash constituent can be adjusted using a desired pH adjuster, for example. Although there is no restriction in particular and it can choose suitably as said pH adjuster according to the purpose, citrate, succinic acid, 2-amino-2-methyl-1-propanol, monoethanolamine, etc. are preferred.

[0065]

<A use>

Since the hair wash constituent of this invention can give a feeling of gloss to hair after desiccation of coloring, a permanent wave, and hair damaged by repetition of excessive dryer desiccation etc., and is excellent in foaming and its segregational stability is good, For example, it can use conveniently for a shampoo for natural complexion cleansing creams, a shampoo for a damage care, a mild shampoo, conditioning shampoo, etc.

[Working example]

[0066]

Although an working example and a comparative example of this invention are given to below and this invention is concretely explained to it, this invention is not limited to these working examples and comparative examples at all.

[0067]

(Working examples 1-48, comparative examples 1-11)

Organic-functions evaluation and mothball stability assessment were performed by a

method shown below about a hair wash constituent obtained by manufacturing a hair wash constituent of an working example of a presentation (mass % in a hair wash constituent is shown.), and a comparative example shown in Tables 1-12 in accordance with the following manufacturing method.

[0068]

<A manufacturing method>

In an 80 ** water bath, water-soluble materials containing the (C) ingredient and the (D) ingredient A mixture solution. ("Aqueous phase" may be called hereafter.) It carried out, and what carried out the mixture solution (a "oil phase" may be called hereafter.) of the oil-soluble ingredient containing the (A) ingredient, the (B) ingredient and the (E) ingredient (Tables 1-10), and also the (F) ingredient (Tables 11-12) was added and mixed homogenously to said aqueous phase. Then, stirring, to a room temperature, it cooled and mixed homogenously after adding perfume. Citrate was used as a pH adjuster and a cooled hair wash constituent was adjusted the pH to 5.5 (a pH meter: the DKK-TOA CORP. make, HM-30G, measurement temperature:25 **).

The hair wash constituent was prepared in said similar way except not adding the (D) ingredient in the (C) ingredient and the comparative example 5 in the (B) ingredient and the comparative example 4 in the comparative example 3. In the comparative examples 6-9, the hair wash constituent was prepared in said similar way except having replaced with the (E) ingredient and having added the ingredient (E').

[0069]

<Organic-functions evaluation>

After a shampoo perform chemical treatments, such as coloring and a permanent wave, within three months, and according to a detergent, 20 women in his 30's - her 40's who sense that there is no feeling of gloss in hair were made into the test subject, the hair wash constituent shown in Tables 1-12 was used for seven days, and "the goodness of foaming" and the "feeling of gloss of hair after desiccation" were evaluated based on the following valuation basis, respectively.

- Valuation basis -

O : those who answered that it was good are 18 persons - 20 persons.

O -O : those who answered that it was good are 14 persons - 17 persons.

O : those who answered that it was good are ten persons - 13 persons.

** : Those who answered that it was good are five persons - nine persons.

x : the things it was answered that were good are zero person - four persons.

The "fitness" as used in the above-mentioned valuation basis means that hair has a feeling of gloss.

[0070]

<Mothball stability assessment>

About 40 mL restoration was carried out, respectively, 50 ** of hair wash constituent 50mL shown in Tables 1-12 was saved for one month at glass buyer RUBIN, and the appearance by visual judgment estimated segregational stability based on the following valuation basis.

- A valuation basis -

O: No change in appearance and separation is observed.

O: Separation is not observed although an uneven shade is observed in a color tone in part.

**: Separation is slightly observed.

x: Separation is observed.

[0071]

[Table 1]

分類	成分名	配合量質量(%)					
		実施例					
		1	2	3	4	5	6
(A) アニオン性 界面活性剤	ホリオキシエチレンラウリルエーテル硫酸ナトリウム(2E.O.)	7	—	—	5	15	10
	αオレフィンスルホン酸ナトリウム	—	7	—	—	—	—
	N-ヤシ油脂脂肪酸アシル-L-グルタミン酸トリエタノールアミン	—	—	7	—	—	—
(B) 両性 界面活性剤	ラウリン酸アミドプロピルベタイン	8	8	8	8	8	8
	ラウリン酸ジメチルアミノ酢酸ベタイン	—	—	—	—	—	—
(C) カチオン性 界面活性剤	塩化ベヘニルトリメチルアンモニウム	2.5	2.5	2.5	2.5	2.5	2.5
	塩化ステアリルトリメチルアンモニウム	—	—	—	—	—	—
	ステアリン酸ジメチルアミノプロピルアミド	—	—	—	—	—	—
(D) 長鎖脂肪酸 アルコール	ベヘニルアルコール	6	6	6	6	6	6
	ステアリルアルコール	—	—	—	—	—	—
(E) 二鎖型ノニオン性 界面活性剤 HLB10~20	ホリオキシエチレンセトステアリルヒドロキシミリスチレンエーテル(60E.O.)HLB=17	0.5	0.5	0.5	0.5	0.5	0.5
	ジラウリン酸ホリエチレングリコール(12E.O.)HLB=10	—	—	—	—	—	—
	ジラウリン酸ホリエチレングリコール(20E.O.)HLB=12	—	—	—	—	—	—
	ジステアリン酸ホリエチレングリコール(150E.O.)HLB=20	—	—	—	—	—	—
(E') ノニオン性 界面活性剤	ステアリン酸ホリエチレングリコール(10E.O.)HLB=11	—	—	—	—	—	—
	ジステアリン酸ホリエチレングリコール(2E.O.)HLB=0	—	—	—	—	—	—
	ジステアリン酸ホリエチレングリコール(8E.O.)HLB=5	—	—	—	—	—	—
	ジイソステアリン酸ホリエチレングリコール(12E.O.)HLB=8	—	—	—	—	—	—
その他	ラウリルジメチルアミノオキソド	1	1	1	1	1	1
	ホリオキシエチレンベヘニルエーテル(10E.O.)	0.2	0.2	0.2	0.2	0.2	0.2
	ヒドロキシプロピルメチルセルロース	0.05	0.05	0.05	0.05	0.05	0.05
	プロピレングリコール	3	3	3	3	3	3
	濃グリセリン	15	15	15	15	15	15
	ヘントナイト	0.3	0.3	0.3	0.3	0.3	0.3
	クエン酸	0.14	0.14	0.14	0.14	0.14	0.14
	ヒドロキシエタンジホスホン酸	0.1	0.1	0.1	0.1	0.1	0.1
	香料	0.55	0.55	0.55	0.55	0.55	0.55
	精製水	バランス	バランス	バランス	バランス	バランス	バランス
合計		100	100	100	100	100	100
(C)/(A) (質量比)		0.36	0.36	0.36	0.50	0.17	0.25
(E)/[(A)+(C)] (質量比)		0.05	0.05	0.05	0.07	0.03	0.04
(C)/(D) (質量比)		0.42	0.42	0.42	0.42	0.42	0.42
使用感	泡立ちの良さ	◎	◎	◎	○	○	◎
	乾燥後の髪のツヤ感	◎~○	○	○	○	○	◎~○
長期保存安定性	分離安定性	◎	◎	◎	◎	○	◎

[0072]

[Table 2]

分類	成分名	配合量質量(%)					
		実施例					
		7	8	9	10	11	12
(A) アニオン性 界面活性剤	ホリオキシエチレンラウリルエーテル硫酸ナトリウム(2E.O.)	7	7	7	7	7	7
	αオレフィンスルホン酸ナトリウム	—	—	—	—	—	—
	N-ヤシ油脂肪酸アシル-L-グルタミン酸トリエタノールアミン	—	—	—	—	—	—
(B) 両性 界面活性剤	ラウリン酸アミドプロピルベータイン	—	2.5	5	10	15	20
	ラウリン酸ジメチルアミノ酢酸ベータイン	8	—	—	—	—	—
(C) カチオン性 界面活性剤	塩化ベヘニルトリメチルアンモニウム	2.5	2.5	2.5	2.5	2.5	2.5
	塩化ステアリルトリメチルアンモニウム	—	—	—	—	—	—
	ステアリン酸ジメチルアミドプロピルアミド	—	—	—	—	—	—
(D) 長鎖脂肪酸 アルコール	ベヘニルアルコール	6	6	6	6	6	6
	ステアリルアルコール	—	—	—	—	—	—
(E) 二鎖型ノニオン性 界面活性剤 HLB10~20	ホリオキシエチレンセトステアリルヒドロキシミリスチンエーテル(60E.O.)HLB=17	0.5	0.5	0.5	0.5	0.5	0.5
	ジラウリン酸ホリエチレングリコール(12E.O.)HLB=10	—	—	—	—	—	—
	ジラウリン酸ホリエチレングリコール(20E.O.)HLB=12	—	—	—	—	—	—
	ジステアリン酸ホリエチレングリコール(150E.O.)HLB=20	—	—	—	—	—	—
(E) ノニオン性 界面活性剤	ステアリン酸ホリエチレングリコール(10E.O.)HLB=11	—	—	—	—	—	—
	ジステアリン酸ホリエチレングリコール(2E.O.)HLB=0	—	—	—	—	—	—
	ジステアリン酸ホリエチレングリコール(8E.O.)HLB=5	—	—	—	—	—	—
	ジイステアリン酸ホリエチレングリコール(12E.O.)HLB=8	—	—	—	—	—	—
その他	ラウリルジメチルアミノオキソド	1	1	1	1	1	1
	ホリオキシエチレンベヘニルエーテル(10E.O.)	0.2	0.2	0.2	0.2	0.2	0.2
	ヒドロキシプロピルメチルセルロース	0.05	0.05	0.05	0.05	0.05	0.05
	プロピレングリコール	3	3	3	3	3	3
	濃グリセリン	15	15	15	15	15	15
	ベントナイト	0.3	0.3	0.3	0.3	0.3	0.3
	クエン酸	0.14	0.14	0.14	0.14	0.14	0.14
	ヒドロキシエタンジホスホン酸	0.1	0.1	0.1	0.1	0.1	0.1
	香料	0.55	0.55	0.55	0.55	0.55	0.55
	精製水	バランス	バランス	バランス	バランス	バランス	バランス
合計		100	100	100	100	100	100
(C)/(A) (質量比)		0.36	0.36	0.36	0.36	0.36	0.36
(E)/[(A)+(C)] (質量比)		0.05	0.05	0.05	0.05	0.05	0.05
(C)/(D) (質量比)		0.42	0.42	0.42	0.42	0.42	0.42
使用感	泡立ちの良さ	◎	○	◎~○	◎	◎	◎
	乾燥後の髪のツヤ感	◎~○	○	◎~○	◎~○	◎~○	◎~○
長期保存安定性	分離安定性	◎	○	◎	◎	◎	○

[0073]

[Table 3]

分類	成分名	配合量質量(%)			
		実施例			
		13	14	15	16
(A) アニオン性 界面活性剤	ホリオキシエチレンラウリルエーテル硫酸ナトリウム(2E.O.)	7	7	7	7
	αオレフィンスルホン酸ナトリウム	—	—	—	—
	N-ヤシ油脂脂肪酸アシル-L-グルタミン酸トリエタノールアミン	—	—	—	—
(B) 両性 界面活性剤	ラウリン酸アミトプロピルヘタイン	8	8	8	8
	ラウリン酸ジメチルアミノ酢酸ヘタイン	—	—	—	—
(C) カチオン性 界面活性剤	塩化ヘニルトリメチルアンモニウム	—	—	0.5	5
	塩化ステアリルトリメチルアンモニウム	2.5	—	—	—
	ステアリン酸ジメチルアミトプロピルアミド	—	2.5	—	—
(D) 長鎖脂肪酸 アルコール	ヘニルアルコール	6	6	6	6
	ステアリルアルコール	—	—	—	—
(E) 二鎖型ノニオン性 界面活性剤 HLB10~20	ホリオキシエチレンセトステアリルヒドロキシミリスチレンエーテル(60E.O.)HLB=17	0.5	0.5	0.5	0.5
	ジラウリン酸ホリエチレングリコール(12E.O.)HLB=10	—	—	—	—
	ジラウリン酸ホリエチレングリコール(20E.O.)HLB=12	—	—	—	—
	ジステアリン酸ホリエチレングリコール(150E.O.)HLB=20	—	—	—	—
(E') ノニオン性 界面活性剤	ステアリン酸ホリエチレングリコール(10E.O.)HLB=11	—	—	—	—
	ジステアリン酸ホリエチレングリコール(2E.O.)HLB=0	—	—	—	—
	ジステアリン酸ホリエチレングリコール(8E.O.)HLB=5	—	—	—	—
	ジイステアリン酸ホリエチレングリコール(12E.O.)HLB=8	—	—	—	—
その他	ラウリルジメチルアミノオキッド	1	1	1	1
	ホリオキシエチレンヘニルエーテル(10E.O.)	0.2	0.2	0.2	0.2
	ヒドロキシプロピルメチルセルローズ	0.05	0.05	0.05	0.05
	プロピレングリコール	3	3	3	3
	濃グリセリン	15	15	15	15
	ヘントナイト	0.3	0.3	0.3	0.3
	クエン酸	0.14	0.14	0.14	0.14
	ヒドロキシエタンジホスホン酸	0.1	0.1	0.1	0.1
	香料	0.55	0.55	0.55	0.55
	精製水	バランス	バランス	バランス	バランス
合計		100	100	100	100
(C)/(A) (質量比)		0.36	0.36	0.07	0.71
(E)/[(A)+(C)] (質量比)		0.05	0.05	0.07	0.04
(C)/(D) (質量比)		0.42	0.42	0.08	0.83
使用感	泡立ちの良さ	◎	◎	○	◎
	乾燥後の髪ツヤ感	◎~○	◎~○	○	○
長期保存安定性	分離安定性	◎	◎	○	○

[0074]

[Table 4]

分類	成分名	配合量質量(%)			
		実施例			
		17	18	19	20
(A) アニオン性 界面活性剤	ホリオキシエチレン라우リルエーテル硫酸ナトリウム(2E.O.)	7	7	7	7
	αオレフィンスルホン酸ナトリウム	—	—	—	—
	N-ヤシ油脂肪酸アシル-L-グルタミン酸トリエタノールアミン	—	—	—	—
(B) 両性 界面活性剤	ラウリン酸アミトプロピルヘタイン	8	8	8	8
	ラウリン酸ジメチルアミノ酢酸ヘタイン	—	—	—	—
(C) カチオン性 界面活性剤	塩化ヘニルトリメチルアンモニウム	2.5	2.5	2.5	2.5
	塩化ステアリルトリメチルアンモニウム	—	—	—	—
	ステアリン酸ジメチルアミトプロピルヘタイン	—	—	—	—
(D) 長鎖脂肪酸 アルコール	ヘニルアルコール	—	1	4	10
	ステアリルアルコール	6	—	—	—
(E) 二鎖型ノニオン性 界面活性剤 HLB10~20	ホリオキシエチレンセトステアリルヒドロキシミリスチンエーテル(60E.O.)HLB=17	0.5	0.5	0.5	0.5
	ジラウリン酸ホリエチレングリコール(12E.O.)HLB=10	—	—	—	—
	ジラウリン酸ホリエチレングリコール(20E.O.)HLB=12	—	—	—	—
	ジステアリン酸ホリエチレングリコール(150E.O.)HLB=20	—	—	—	—
(E) ノニオン性 界面活性剤	ステアリン酸ホリエチレングリコール(10E.O.)HLB=11	—	—	—	—
	ジステアリン酸ホリエチレングリコール(2E.O.)HLB=0	—	—	—	—
	ジステアリン酸ホリエチレングリコール(8E.O.)HLB=5	—	—	—	—
	ジイソステアリン酸ホリエチレングリコール(12E.O.)HLB=8	—	—	—	—
その他	ラウリルジメチルアミノオキシド	1	1	1	1
	ホリオキシエチレンヘニルエーテル(10E.O.)	0.2	0.2	0.2	0.2
	ヒドロキシプロピルメチルセルロース	0.05	0.05	0.05	0.05
	プロピレングリコール	3	3	3	3
	濃グリセリン	15	15	15	15
	ベントナイト	0.3	0.3	0.3	0.3
	クエン酸	0.14	0.14	0.14	0.14
	ヒドロキシエタンジホスホン酸	0.1	0.1	0.1	0.1
	香料	0.55	0.55	0.55	0.55
	精製水	バランス	バランス	バランス	バランス
	合計	100	100	100	100
(C)/(A) (質量比)		0.36	0.36	0.36	0.36
(E)/[(A)+(C)] (質量比)		0.05	0.05	0.05	0.05
(C)/(D) (質量比)		0.42	2.50	0.63	0.25
使用感	泡立ちの良さ	○	○	◎	◎
	乾燥後の髪ツヤ感	◎~○	○	◎~○	◎~○
長期保存安定性	分離安定性	◎	○	◎	○

[0075]

[Table 5]

分類	成分名	配合量質量(%)			
		実施例			
		21	22	23	24
(A) アニオン性 界面活性剤	ホリオキシエチレンラウリルエーテル硫酸ナトリウム(2E.O.)	7	7	7	7
	αオレフィンスルホン酸ナトリウム	—	—	—	—
	N-ヤシ油脂脂肪酸アシル-L-グルタミン酸トリエタノールアミン	—	—	—	—
(B) 両性 界面活性剤	ラウリン酸アミドプロピルベータイン	8	8	8	8
	ラウリン酸ジメチルアミノ酢酸ベータイン	—	—	—	—
(C) カチオン性 界面活性剤	塩化ベヘニルトリメチルアンモニウム	2.5	2.5	2.5	2.5
	塩化ステアリルトリメチルアンモニウム	—	—	—	—
	ステアリン酸ジメチルアミノプロピルアミド	—	—	—	—
(D) 長鎖脂肪酸 アルコール	ベヘニルアルコール	6	6	6	6
	ステアリルアルコール	—	—	—	—
(E) 二鎖型ノニオン性 界面活性剤 HLB10~20	ホリオキシエチレンセトステアリルヒドロキシミリスチレンエーテル(60E.O.)HLB=17	—	—	—	0.25
	ジラウリン酸ホリエチレングリコール(12E.O.)HLB=10	0.5	—	—	0.25
	ジラウリン酸ホリエチレングリコール(20E.O.)HLB=12	—	0.5	—	—
	ジステアリン酸ホリエチレングリコール(150E.O.)HLB=20	—	—	0.5	—
(E') ノニオン性 界面活性剤	ステアリン酸ホリエチレングリコール(10E.O.)HLB=11	—	—	—	—
	ジステアリン酸ホリエチレングリコール(2E.O.)HLB=0	—	—	—	—
	ジステアリン酸ホリエチレングリコール(8E.O.)HLB=5	—	—	—	—
	ジイソステアリン酸ホリエチレングリコール(12E.O.)HLB=8	—	—	—	—
その他	ラウリルジメチルアミノキト	1	1	1	1
	ホリオキシエチレンベヘニルエーテル(10E.O.)	0.2	0.2	0.2	0.2
	ヒドロキシプロピルメチルセルロース	0.05	0.05	0.05	0.05
	プロピレングリコール	3	3	3	3
	濃グリセリン	15	15	15	15
	ペントナイト	0.3	0.3	0.3	0.3
	クエン酸	0.14	0.14	0.14	0.14
	ヒドロキシエタンジホスホン酸	0.1	0.1	0.1	0.1
	香料	0.55	0.55	0.55	0.55
	精製水	バランス	バランス	バランス	バランス
	合計	100	100	100	100
(C)/(A) (質量比)		0.36	0.36	0.36	0.36
(E)/[(A)+(C)] (質量比)		0.05	0.05	0.05	0.05
(C)/(D) (質量比)		0.42	0.42	0.42	0.42
使用感	泡立ちの良さ	◎~○	◎	◎~○	◎~○
	乾燥後の髪ツヤ感	○	◎~○	◎~○	◎~○
長期保存安定性	分離安定性	◎	◎	○	◎

[0076]

[Table 6]

分類	成分名	配合量質量(%)			
		実施例			
		25	26	27	28
(A) アニオン性 界面活性剤	ホ ⁺ リオキシエチレンラウリルエーテル硫酸ナトリウム(2E.O.)	7	7	7	7
	αオレフィンスルホン酸ナトリウム	—	—	—	—
	N-ヤシ油脂脂肪酸アシル-L-グルタミン酸トリエタノールアミン	—	—	—	—
(B) 両性 界面活性剤	ラウリン酸アミト ⁺ プロピルヘ ⁺ タイン	8	8	8	8
	ラウリン酸ジ ⁺ メチルアミノ酢酸ヘ ⁺ タイン	—	—	—	—
(C) カチオン性 界面活性剤	塩化ヘ ⁺ ニルトリメチルアンモニウム	2.5	2.5	2.5	2.5
	塩化ステアリルトリメチルアンモニウム	—	—	—	—
	ステアリン酸ジ ⁺ メチルアミノプロピルアミト ⁺	—	—	—	—
(D) 長鎖脂肪酸 アルコール	ヘ ⁺ ニルアルコール	6	6	6	6
	ステアリルアルコール	—	—	—	—
(E) 二鎖型ノニオン性 界面活性剤 HLB10~20	ホ ⁺ リオキシエチレンセトステアリルヒト ⁺ ロキシミリスチレンエーテル(60E.O.)HLB=17	0.05	0.2	2	5
	ジ ⁺ ラウリン酸ホ ⁺ リエチレング ⁺ リコール(12E.O.)HLB=10	—	—	—	—
	ジ ⁺ ラウリン酸ホ ⁺ リエチレング ⁺ リコール(20E.O.)HLB=12	—	—	—	—
	ジ ⁺ ステアリン酸ホ ⁺ リエチレング ⁺ リコール(150E.O.)HLB=20	—	—	—	—
(E') ノニオン性 界面活性剤	ステアリン酸ホ ⁺ リエチレング ⁺ リコール(10E.O.)HLB=11	—	—	—	—
	ジ ⁺ ステアリン酸ホ ⁺ リエチレング ⁺ リコール(2E.O.)HLB=0	—	—	—	—
	ジ ⁺ ステアリン酸ホ ⁺ リエチレング ⁺ リコール(8E.O.)HLB=5	—	—	—	—
	ジ ⁺ イソステアリン酸ホ ⁺ リエチレング ⁺ リコール(12E.O.)HLB=8	—	—	—	—
その他	ラウリルジ ⁺ メチルアミノオキソ ⁺	1	1	1	1
	ホ ⁺ リオキシエチレンヘ ⁺ ニルエーテル(10E.O.)	0.2	0.2	0.2	0.2
	ヒト ⁺ ロキシプロピルメチルセルローズ	0.05	0.05	0.05	0.05
	プロピレング ⁺ リコール	3	3	3	3
	濃グリセリン	15	15	15	15
	ベントナイト	0.3	0.3	0.3	0.3
	クエン酸	0.14	0.14	0.14	0.14
	ヒト ⁺ ロキシエタノールホスホン酸	0.1	0.1	0.1	0.1
	香料	0.55	0.55	0.55	0.55
	精製水	バランス	バランス	バランス	バランス
	合計	100	100	100	100
(C)/(A) (質量比)		0.36	0.36	0.36	0.36
(E)/[(A)+(C)] (質量比)		0.01	0.02	0.21	0.53
(C)/(D) (質量比)		0.42	0.42	0.42	0.42
使用感	泡立ちの良さ	○	◎	◎	◎~○
	乾燥後の髪の手触り感	◎~○	◎~○	◎~○	○
長期保存安定性	分離安定性	○	◎	◎	○

[0077]

[Table 7]

分類	成分名	配合量質量(%)			
		実施例			
		29	30	31	32
(A) アニオン性 界面活性剤	ホリオキシエチレンラウリルエーテル硫酸ナトリウム(2E.O.)	5	6	7	7.5
	αオレフィンスルホン酸ナトリウム	—	—	—	—
	N-ヤシ油脂脂肪酸アシル-L-グルタミン酸トリエタノールアミン	—	—	—	—
(B) 両性 界面活性剤	ラウリン酸アミトプロピルヘタイン	8	8	8	8
	ラウリン酸ジメチルアミノ酢酸ヘタイン	—	—	—	—
(C) カチオン性 界面活性剤	塩化ヘニルトリメチルアンモニウム	3.0	4.0	1.0	0.5
	塩化ステアリルトリメチルアンモニウム	—	—	—	—
	ステアリン酸ジメチルアミプロピルアミド	—	—	—	—
(D) 長鎖脂肪酸 アルコール	ヘニルアルコール	6	6	6	6
	ステアリルアルコール	—	—	—	—
(E) 二鎖型ノニオン性 界面活性剤 HLB10~20	ホリオキシエチレンセトステアリルヒドロキシメリスチレンエーテル(60E.O.)HLB=17	0.5	0.5	0.5	0.5
	ジラウリン酸ホリエチレングリコール(12E.O.)HLB=10	—	—	—	—
	ジラウリン酸ホリエチレングリコール(20E.O.)HLB=12	—	—	—	—
	ジステアリン酸ホリエチレングリコール(150E.O.)HLB=20	—	—	—	—
(E') ノニオン性 界面活性剤	ステアリン酸ホリエチレングリコール(10E.O.)HLB=11	—	—	—	—
	ジステアリン酸ホリエチレングリコール(2E.O.)HLB=0	—	—	—	—
	ジステアリン酸ホリエチレングリコール(8E.O.)HLB=5	—	—	—	—
	ジイステアリン酸ホリエチレングリコール(12E.O.)HLB=8	—	—	—	—
その他	ラウリルジメチルアミノオキッド	1	1	1	1
	ホリオキシエチレンヘニルエーテル(10E.O.)	0.2	0.2	0.2	0.2
	ヒドロキシプロピルメチルセルロース	0.05	0.05	0.05	0.05
	プロピレングリコール	3	3	3	3
	濃グリセリン	15	15	15	15
	ペントナイト	0.3	0.3	0.3	0.3
	クエン酸	0.14	0.14	0.14	0.14
	ヒドロキシエタンジホスホン酸	0.1	0.1	0.1	0.1
	香料	0.55	0.55	0.55	0.55
	精製水	バランス	バランス	バランス	バランス
合計		100	100	100	100
(C)/(A) (質量比)		0.60	0.67	0.14	0.07
(E)/[(A)+(C)] (質量比)		0.06	0.05	0.06	0.06
(C)/(D) (質量比)		0.50	0.67	0.17	0.08
使用感	泡立ちの良さ	◎	◎~○	◎~○	○
	乾燥後の髪ツヤ感	◎~○	◎~○	◎~○	○
長期保存安定性	分離安定性	◎	◎	◎	◎

[0078]

[Table 8]

分類	成分名	配合量質量(%)			
		実施例			
		33	34	35	36
(A) アニオン性 界面活性剤	ホ ¹ リオキシエチレンラウリルエーテル硫酸ナトリウム(2E.O.)	7	7	8	7
	αオレフィンスルホン酸ナトリウム	—	—	—	—
	N-ヤシ油脂肪酸アシル-L-グルタミン酸トリエタノールアミン	—	—	—	—
(B) 両性 界面活性剤	ラウリン酸アミト ¹ プロピルヘ ¹ タイン	8	8	7	8
	ラウリン酸ジ ¹ メチルアミノ酢酸ヘ ¹ タイン	—	—	—	—
(C) カチオン性 界面活性剤	塩化ヘ ¹ ニルトリメチルアンモニウム	2.0	1.5	1.7	1.0
	塩化ステアリルトリメチルアンモニウム	—	—	—	—
	ステアリン酸ジ ¹ メチルアミノプロピルアミト ¹	—	—	—	—
(D) 長鎖脂肪酸 アルコール	ヘ ¹ ニルアルコール	6	6	6	6
	ステアリルアルコール	—	—	—	—
(E) 二鎖型ノオン性 界面活性剤 HLB10~20	ホ ¹ リオキシエチレンセトステアリルヒト ¹ ロキシミリスチレンエーテル(60E.O.)HLB=17	1	0.5	0.1	1
	ジ ¹ ラウリン酸ホ ¹ リエチレング ¹ リコール(12E.O.)HLB=10	—	—	0.1	1
	ジ ¹ ラウリン酸ホ ¹ リエチレング ¹ リコール(20E.O.)HLB=12	—	1	0.1	—
	ジ ¹ ステアリン酸ホ ¹ リエチレング ¹ リコール(150E.O.)HLB=20	—	—	—	—
(E') ノオン性 界面活性剤	ステアリン酸ホ ¹ リエチレング ¹ リコール(10E.O.)HLB=11	—	—	—	—
	ジ ¹ ステアリン酸ホ ¹ リエチレング ¹ リコール(2E.O.)HLB=0	—	—	—	—
	ジ ¹ ステアリン酸ホ ¹ リエチレング ¹ リコール(8E.O.)HLB=5	—	—	—	—
	ジ ¹ イソステアリン酸ホ ¹ リエチレング ¹ リコール(12E.O.)HLB=8	—	—	—	—
その他	ラウリンジ ¹ メチルアミノオキシト ¹	1	1	1	1
	ホ ¹ リオキシエチレンヘ ¹ ニルエーテル(10E.O.)	0.2	0.2	0.2	0.2
	ヒト ¹ ロキシプロピルメチルセルロース	0.05	0.05	0.05	0.05
	プロピレング ¹ リコール	3	3	3	3
	濃グリセリン	15	15	15	15
	ベントナイト	0.3	0.3	0.3	0.3
	クエン酸	0.14	0.14	0.14	0.14
	ヒト ¹ ロキシエタジ ¹ ホスホン酸	0.1	0.1	0.1	0.1
	香料	0.55	0.55	0.55	0.55
	精製水	バランス	バランス	バランス	バランス
	合計	100	100	100	100
(C)/(A) (質量比)		0.29	0.21	0.21	0.14
(E)/[(A)+(C)] (質量比)		0.11	0.18	0.03	0.25
(C)/(D) (質量比)		0.33	0.25	0.28	0.17
使用感	泡立ちの良さ	◎	◎~○	◎	◎
	乾燥後の髪ツヤ感	◎~○	◎~○	◎~○	◎~○
長期保存安定性	分離安定性	◎	◎	◎	◎

[0079]

[Table 9]

分類	成分名	配合量質量(%)				
		比較例				
		1	2	3	4	5
(A) アニオン性 界面活性剤	ホリオキシエチレンラウリルエーテル硫酸ナトリウム(2E.O.)	3	17	7	7	7
	αオレフィンスルホン酸ナトリウム	—	—	—	—	—
	N-ヤシ油脂脂肪酸アシル-L-グルタミン酸トリエタノールアミン	—	—	—	—	—
(B) 両性 界面活性剤	ラウリン酸アミトプロピルヘタイン	8	8	—	8	8
	ラウリン酸ジメチルアミノ酢酸ヘタイン	—	—	—	—	—
(C) カチオン性 界面活性剤	塩化ヘニルトリメチルアンモニウム	2.5	2.5	2.5	—	2.5
	塩化ステアリルトリメチルアンモニウム	—	—	—	—	—
	ステアリン酸ジメチルアミプロピルアミト	—	—	—	—	—
(D) 長鎖脂肪酸 アルコール	ヘニルアルコール	6	6	6	6	—
	ステアリルアルコール	—	—	—	—	—
(E) 二鎖型ノニオン性 界面活性剤 HLB10~20	ホリオキシエチレンセトステアリルヒドロキシミリスチレンエーテル(60E.O.)HLB=17	0.5	0.5	0.5	0.5	0.5
	ジラウリン酸ホリエチレングリコール(12E.O.)HLB=10	—	—	—	—	—
	ジラウリン酸ホリエチレングリコール(20E.O.)HLB=12	—	—	—	—	—
	ジステアリン酸ホリエチレングリコール(150E.O.)HLB=20	—	—	—	—	—
(E) ノニオン性 界面活性剤	ステアリン酸ホリエチレングリコール(10E.O.)HLB=11	—	—	—	—	—
	ジステアリン酸ホリエチレングリコール(2E.O.)HLB=0	—	—	—	—	—
	ジステアリン酸ホリエチレングリコール(8E.O.)HLB=5	—	—	—	—	—
	ジイソステアリン酸ホリエチレングリコール(12E.O.)HLB=8	—	—	—	—	—
その他	ラウリルジメチルアミノオキシド	1	1	1	1	1
	ホリオキシエチレンヘニルエーテル(10E.O.)	0.2	0.2	0.2	0.2	0.2
	ヒドロキシプロピルメチルセルロース	0.05	0.05	0.05	0.05	0.05
	プロピレングリコール	3	3	3	3	3
	濃グリセリン	15	15	15	15	15
	ベンツナイト	0.3	0.3	0.3	0.3	0.3
	クエン酸	0.14	0.14	0.14	0.14	0.14
	ヒドロキシエタノールホスホン酸	0.1	0.1	0.1	0.1	0.1
	香料	0.55	0.55	0.55	0.55	0.55
	精製水	バランス	バランス	バランス	バランス	バランス
合計		100	100	100	100	100
(C)/(A) (質量比)		0.83	0.15	0.36	0.00	0.36
(E)/[(A)+(C)] (質量比)		0.09	0.03	0.05	0.07	0.05
(C)/(D) (質量比)		0.42	0.42	0.42	0.00	—
使用感	泡立ちの良さ	△	△	△	×	×
	乾燥後の髪ツヤ感	×	△	×	×	×
長期保存安定性	分離安定性	○	×	×	×	△

[0080]

[Table 10]

分類	成分名	配合量質量(%)					
		比較例					
		6	7	8	9	10	11
(A) アニオン性 界面活性剤	ポリオキシエチレンラウリルエーテル硫酸ナトリウム(2E.O.)	7	7	7	7	2.5	—
	αオレフィンスルホン酸ナトリウム	—	—	—	—	—	—
	N-ヤシ油脂脂肪酸アシル-L-グルタミン酸トリエタノールアミン	—	—	—	—	—	3
(B) 両性 界面活性剤	ラウリン酸アミトプロピルヘタイン	8	8	8	8	12.5	12
	ラウリン酸ジメチルアミノ酢酸ヘタイン	—	—	—	—	—	—
(C) カチオン性 界面活性剤	塩化ヘニルトリメチルアンモニウム	2.5	2.5	2.5	2.5	2.5	2
	塩化ステアリルトリメチルアンモニウム	—	—	—	—	—	—
	ステアリン酸ジメチルアミノプロピルアミド	—	—	—	—	—	—
(D) 長鎖脂肪酸 アルコール	ヘニルアルコール	6	6	6	6	6	3
	ステアリルアルコール	—	—	—	—	—	—
(E) 二鎖型ノニオン性 界面活性剤 HLB10~20	ポリオキシエチレンセトステアリルヒドロキシメチルステレンエーテル(60E.O.)HLB=17	—	—	—	—	0.5	—
	ジラウリン酸ホリエチレングリコール(12E.O.)HLB=10	—	—	—	—	—	—
	ジラウリン酸ホリエチレングリコール(20E.O.)HLB=12	—	—	—	—	—	—
	ジステアリン酸ホリエチレングリコール(150E.O.)HLB=20	—	—	—	—	—	0.5
(E') ノニオン性 界面活性剤	ステアリン酸ホリエチレングリコール(10E.O.)HLB=11	0.5	—	—	—	—	—
	ジステアリン酸ホリエチレングリコール(2E.O.)HLB=0	—	0.5	—	—	—	—
	ジステアリン酸ホリエチレングリコール(8E.O.)HLB=5	—	—	0.5	—	—	—
	ジイステアリン酸ホリエチレングリコール(12E.O.)HLB=8	—	—	—	0.5	—	—
その他	ラウリルジメチルアミノキシト	1	1	1	1	1	1
	ポリオキシエチレンヘニルエーテル(10E.O.)	0.2	0.2	0.2	0.2	0.2	0.2
	ヒドロキシプロピルメチルセルロース	0.05	0.05	0.05	0.05	0.05	0.05
	プロピレングリコール	3	3	3	3	3	3
	濃グリセリン	15	15	15	15	15	15
	ベンツナイト	0.3	0.3	0.3	0.3	0.3	0.3
	クエン酸	0.14	0.14	0.14	0.14	0.14	0.14
	ヒドロキシエタンジホスホン酸	0.1	0.1	0.1	0.1	0.1	0.1
	香料	0.55	0.55	0.55	0.55	0.55	0.55
	精製水	ハランス	ハランス	ハランス	ハランス	ハランス	ハランス
	合計	100	100	100	100	100	100
	(C)/(A) (質量比)	0.36	0.36	0.36	0.36	1.00	0.67
	(E)/[(A)+(C)] (質量比)	0.05	0.05	0.05	0.05	0.10	0.10
	(C)/(D) (質量比)	0.42	0.42	0.42	0.42	0.42	0.67
使用感	泡立ちの良さ	○	×	△	△	○	×
	乾燥後の髪ツヤ感	×	△	△	△	△	△
長期保存安定性	分離安定性	△	△	△	△	△	△

[0081]

[Table 11]

分類	成分名	実施例					
		37	38	39	40	41	42
(A) アニオン性 界面活性剤	ホリオキシエチレンラウリルエーテル硫酸ナトリウム(2E.O.)	7	10	7	7	7	7
	α オレフィンスルホン酸ナトリウム	—	—	—	—	—	—
(B) 両性 界面活性剤	ラウリン酸アミドプロピルベタイン	8	8	10	15	8	8
	ラウリン酸ジメチルアミノ酢酸ベタイン	—	—	—	—	—	—
(C) カチオン性 界面活性剤	塩化ベヘニトリメチルアンモニウム	2.5	2.5	2.5	2.5	2.5	—
	塩化ステアリルトリメチルアンモニウム	—	—	—	—	—	—
	ステアリン酸ジメチルアミノプロピルアミド	—	—	—	—	—	2.5
(D) 長鎖脂肪酸 アルコール	ベヘニルアルコール	6	6	6	6	4	6
	ステアリルアルコール	—	—	—	—	—	—
(E) 二鎖型ノニオン性 界面活性剤 HLB10~20	ホリオキシエチレンセトステアリルヒドロキシミリスチレンエーテル(60E.O.)HLB=17	0.5	0.5	0.5	0.5	0.5	0.5
	ジラウリン酸ホリエチレングリコール(12E.O.)HLB=10	—	—	—	—	—	—
	ジラウリン酸ホリエチレングリコール(20E.O.)HLB=12	—	—	—	—	—	—
(F) シリコン油、 エステル油	シリコンエマルジョンA*1	2(0.18)	—	1.5(0.14)	3(0.27)	—	—
	高重合アミノガムエマルジョン*2	—	2(0.24)	—	—	—	0.5(0.06)
	カプリル酸プロピルヘプチル	—	—	—	—	2.5	1
その他	ラウリルジメチルアミノオキッド	1	1	1	1	1	1
	ホリオキシエチレンベヘニルエーテル(10E.O.)	0.2	0.2	0.2	0.2	0.2	0.2
	ヒドロキシプロピルメチルセルロース	0.05	0.05	0.05	0.05	0.05	0.05
	プロピレングリコール	3	3	3	3	3	3
	濃グリセリン	15	15	15	15	15	15
	ペントナイト	0.3	0.3	0.3	0.3	0.3	0.3
	クエン酸	0.14	0.14	0.14	0.14	0.14	0.14
	ヒドロキシエタジホスホン酸	0.1	0.1	0.1	0.1	0.1	0.1
	香料	0.55	0.55	0.55	0.55	0.55	0.55
	精製水	バランス	バランス	バランス	バランス	バランス	バランス
	合計	100	100	100	100	100	100
(C)/(A) (質量比)		0.36	0.25	0.36	0.36	0.36	0.36
(E)/[(A)+(C)] (質量比)		0.05	0.04	0.05	0.05	0.05	0.05
(C)/(D) (質量比)		0.42	0.42	0.42	0.42	0.63	0.42
使用感	泡立ちの早さ	◎	◎	◎	◎	◎	◎
	乾燥後の髪ツヤ感	◎	◎	◎	◎	◎	◎
長期保存安定性	分散安定性	◎	◎	◎	◎	◎	◎

*1()内は、動粘度1,000mm²/sのジメチルシリコンの含有量

*2()内は、アミノガムシリコンの含有量

[0082]

[Table 12]

分類	成分名	実施例					
		43	44	45	46	47	48
(A) アニオン性 界面活性剤	ホ ¹ リオキシエチレンラウリルエーテル硫酸ナトリウム (2E.O.)	7	7	8	7	7	7
	αオレフィンスルホン酸ナトリウム	—	—	—	—	—	—
(B) 両性 界面活性剤	ラウリン酸アミト ¹ プロピルベ ¹ タイン	8	8	7	8	8	—
	ラウリン酸ジ ¹ メチルアミ ¹ 酢酸ベ ¹ タイン	—	—	—	—	—	8
(C) カチオン性 界面活性剤	塩化ヘ ¹ ニルトリメチルアンモニウム	2.5	2.0	1.7	1.0	—	2.5
	塩化ステアリルトリメチルアンモニウム	—	—	—	—	2.5	—
	ステアリン酸ジ ¹ メチルアミ ¹ ノ ¹ プロピルアミ ¹ ト ¹	—	—	—	—	—	—
(D) 長鎖脂肪酸 アルコール	ヘ ¹ ニルアルコール	6	6	6	6	6	6
	ステアリルアルコール	—	—	—	—	—	—
(E) 二鎖型ノニオン性 界面活性剤 HLB10~20	ホ ¹ リオキシエチレンセトステアリルヒド ¹ ロキシミリスチレンエーテル (60E.O.) HLB=17	2	1	0.1	1	0.5	0.5
	ジ ¹ ラウリン酸ホ ¹ リエチレング ¹ リコール (12E.O.) HLB=10	—	—	0.1	1	—	—
	ジ ¹ ラウリン酸ホ ¹ リエチレング ¹ リコール (20E.O.) HLB=12	—	—	0.1	—	—	—
(F) シリコン油、 エステル油	シリコンエマルジョンA * 1	1(0.09)	2(0.18)	—	—	—	1(0.09)
	高重合アミノガムエマルジョン * 2	2(0.24)	1(0.12)	3(0.36)	2(0.24)	—	—
	カ ¹ プリル酸 ¹ プロピルヘ ¹ プ ¹ チル	—	2	—	1	3	1
その他	ラウリルジ ¹ メチルアミンオキド	1	1	1	1	1	1
	ホ ¹ リオキシエチレンヘ ¹ ニルエーテル (10E.O.)	0.2	0.2	0.2	0.2	0.2	0.2
	ヒド ¹ ロキシ ¹ プロピルメチルセルロース	0.05	0.05	0.05	0.05	0.05	0.05
	プロ ¹ ピレング ¹ リコール	3	3	3	3	3	3
	濃グリセリン	15	15	15	15	15	15
	ベ ¹ ントナイト	0.3	0.3	0.3	0.3	0.3	0.3
	クエン酸	0.14	0.14	0.14	0.14	0.14	0.14
	ヒド ¹ ロキシエタ ¹ ンジ ¹ ホスホン酸	0.1	0.1	0.1	0.1	0.1	0.1
	香料	0.55	0.55	0.55	0.55	0.55	0.55
	精製水	バランス	バランス	バランス	バランス	バランス	バランス
合計		100	100	100	100	100	100
(C)/(A) (質量比)		0.36	0.29	0.21	0.14	0.36	0.36
(E)/[(A)+(C)] (質量比)		0.21	0.11	0.03	0.25	0.05	0.05
(C)/(D) (質量比)		0.42	0.33	0.28	0.17	0.42	0.42
使用感	泡立ちの早さ	◎	◎	◎	◎	◎~○	◎
	乾燥後の髪のツヤ感	◎	◎	◎	◎	◎	◎
長期保存安定性	分散安定性	◎	◎	◎	◎	◎	◎

*1()内は、動粘度1,000万mm²/sのジメチルシリコンの含有量

*2()内は、アミノガムシリコンの含有量

[0083]

The concrete contents of the material used by the working examples 1-48 and the comparative examples 1-11 are as being shown in the following table 13.

[0084]

[Table 13]

分類	成分名	商品名、製造会社名
(A) アニオン性 界面活性剤	ホリオキシエチレンラウリルエーテル硫酸ナトリウム(2E.O.)	シバリンSPE1250、新日本理化学株式会社製
	αオレフィンスルホン酸ナトリウム	リホランLB-440、ライオン株式会社製
	N-ヤシ油脂肪酸アシル-L-グルタミン酸トリエタノールアミン	アミソフトCT-12、味の素株式会社
(B) 両性 界面活性剤	ラウリン酸アミドプロピルベータイン	LPB-30、一方株式会社製
	ラウリン酸ジメチルアミノ酢酸ベータイン	オハゾリンLB、東邦化学工業株式会社
(C) カチオン性 界面活性剤	塩化ヘニルトリメチルアンモニウム	アーカート22-80、ライオン株式会社製
	塩化ステアリルトリメチルアンモニウム	アーカートT800、ライオン株式会社製
	ステアリン酸ジメチルアミノプロピルアミド	カチナルMPAS、東邦化学工業株式会社
(D) 長鎖脂肪酸 アルコール	ヘニルアルコール	LANETTE22、コグニス社製
	ステアリルアルコール	ステアリルアルコール、高級アルコール工業株式会社製
(E) 二鎖型ノニオン性 界面活性剤 HLB10~20	ホリオキシエチレンセトステアリルヒドロキシメチルステレンエーテル(60E.O.)HLB=17	エルファコスGT282S、ライオンアグ社製
	ジラウリン酸ホリエチレングリコール(12E.O.)HLB=10	600di-L、日本エマルジョン株式会社
	ジラウリン酸ホリエチレングリコール(20E.O.)HLB=12	1000di-L、日本エマルジョン株式会社
	ジステアリン酸ホリエチレングリコール(150E.O.)HLB=20	6300DI-ST、日本エマルジョン株式会社
(E') ノニオン性 界面活性剤	ステアリン酸ホリエチレングリコール(10E.O.)HLB=11	EMALEX 810、日本エマルジョン株式会社
	ジステアリン酸ホリエチレングリコール(2E.O.)HLB=0	EMALEX DEG-di-S、日本エマルジョン株式会社
	ジステアリン酸ホリエチレングリコール(8E.O.)HLB=5	EMALEX 400di-S、日本エマルジョン株式会社
	ジイソステアリン酸ホリエチレングリコール(12E.O.)HLB=8	EMALEX 600di-ISEX、日本エマルジョン株式会社
(F) シリコン油、 エステル油	シリコンエマルジョンA * 1	シリコンエマルジョン(6)、ジメチルシリコンとして9質量%含有、ライオン株式会社製
	高重合アミノガムエマルジョン * 2	X-52-2328、アミノプロピルジメチコンとして12質量%含有、信越化学工業株式会社製
	カプリル酸プロピルヘプチル	Cetiol SENSOFT、コグニス社製
その他	ラウリルジメチルアミノオキソド	AX剤S、ライオン株式会社製
	ホリオキシエチレンヘニルエーテル(10E.O.)	BHA-10、日本エマルジョン株式会社製
	ヒドロキシプロピルメチルセルロース	メロース60SH-4000、信越化学工業株式会社製
	プロピレングリコール	PG、旭硝子株式会社製
	濃グリセリン	濃グリセリンS、阪本薬品株式会社製
	ベントナイト	クエピアG、クミネ工業株式会社
	クエン酸	クエン酸、扶桑化学工業株式会社製
	ヒドロキシエタンジホスホン酸	ADPA60A、ライオン株式会社製
	香料	特開2003-300811号公報記載の香料A

[Industrial applicability]

[0085]

Since the hair wash constituent of this invention can give a feeling of gloss to the hair after desiccation of coloring, a permanent wave, and the hair damaged by repetition of excessive dryer desiccation etc., and is excellent in foaming and its segregational stability is good, For example, it can use conveniently for the shampoo for natural complexion cleansing creams, the shampoo for a damage care, a mild shampoo, conditioning shampoo, etc.

[Claim(s)]

[Claim 1]

(A) An anionic surface-active agent,

(B) An ampholytic surface active agent,

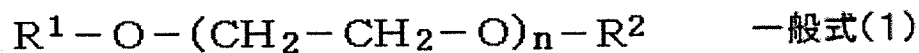
(C) A cationic surface-active agent,

(D) Long-chain aliphatic alcohol,

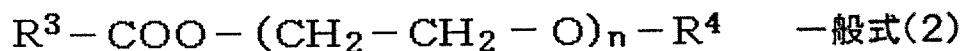
(E) A nonionic surface-active agent of HLB 10-20 expressed with either a following general formula (1) and a following general formula (2),

A hair wash constituent which contains even if small, and is characterized by content of aforementioned (A) anionic surface-active agent being 5 mass % - 15 mass %.

[Chemical formula 19]



[Chemical formula 20]



(R1 - R4 express either an alkyl group of a straight chain of the carbon numbers 12-18, or branched chain, and an alkenyl group among said general formula (1) and said general formula (2), and n is the number of average addition mols of ethyleneoxide, and shows an integer of 3-150.)

[Claim 2]

(A) A rate of a compounding ratio of an ingredient and the (C) ingredient is a mass ratio, (C)/(A)=0.07 - 1.00

It comes out, and it is and also a rate of a compounding ratio of the aforementioned (A) ingredient, the aforementioned (C) ingredient, and the (E) ingredient is a mass ratio,
(E) -- $/(A)+(C)] = 0.01 - 0.53$

It comes out and is a certain hair wash constituent according to claim 1.

[Claim 3]

(F) The hair wash constituent of silicone oil and ester oil liquefied under ordinary temperature according to any one of claims 1 to 2 which contains either further at least.